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MAGAZINE

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February, 1949 Vol. 48, No. 1 35 Cents

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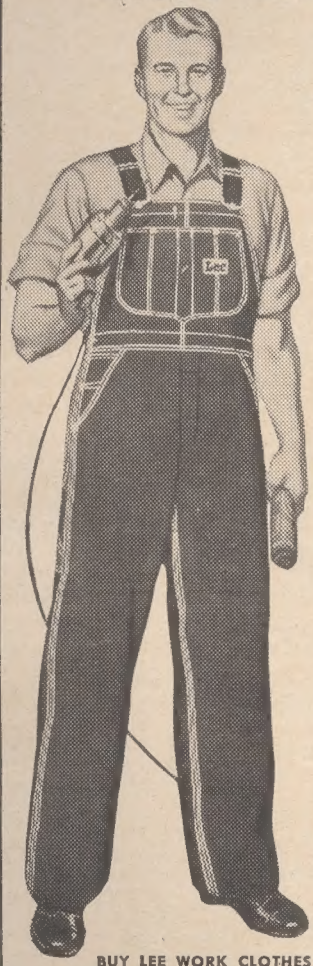

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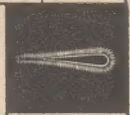

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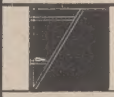

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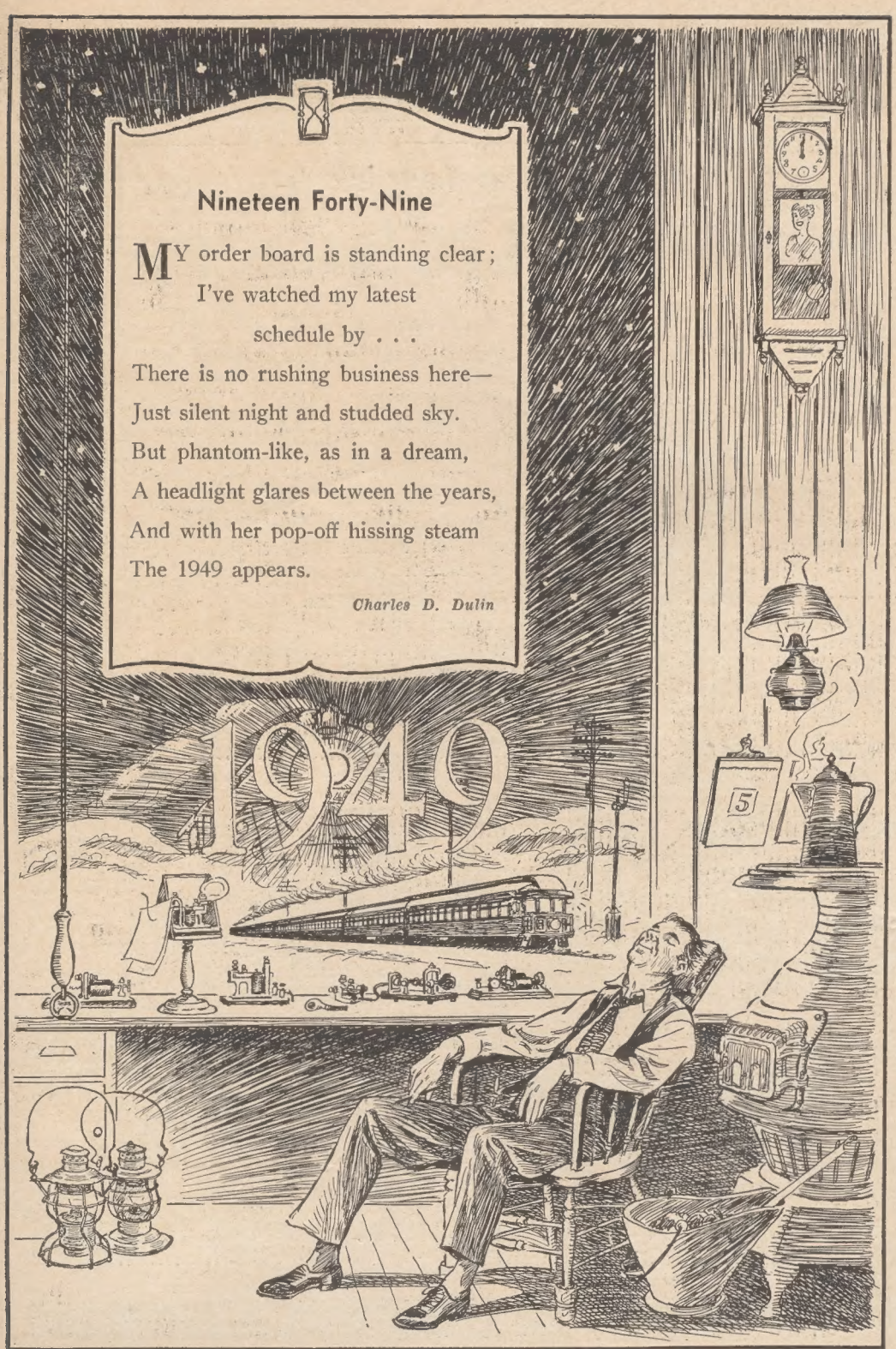
Nineteen Forty-Nine
MY order board is standing clear;
I've watched my latest
schedule by . . .
There is no rushing business here—
Just silent night and studded sky.
But phantom-like, as in a dream,
A headlight glares between the years,
And with her pop-off hissing steam
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Charles D. Dulin
1949

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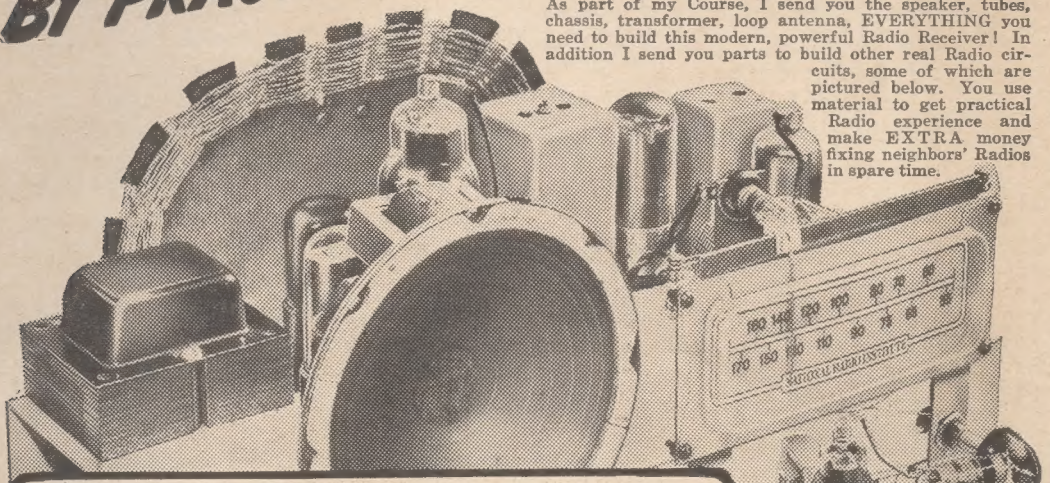

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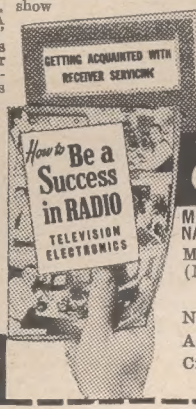

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Lost Engine, Lost Train, Lost Railroad

By PAUL HOYSRADT

WHAT WOULD a train dispatcher today say if he sent a locomotive down the line one dark night and she was never heard from again? This actually happened on a branch line in the southern part of Florida many years ago. Leaving Barstow on a wildcat run, the engine vanished into thin air.

When no word was heard from the engineer, the dispatcher got busy on his phone. Soon his office was in an uproar: the big hook was ready and a wrecking train called out; but there was no report on an accident. Special gangs combed every foot of the territory and not a sign was found. Trainmen thought she might have jumped the narrow-gage track on one of the sharp curves, yet how could she have managed to leave no trail along any of the embankments? And the track was clear all the way to Fort Myers.

It was 10 years before the mystery was finally solved. One day some surveyors were driving stakes in a Florida swamp when they struck something hard and unyielding. Digging down into the slime they uncovered, to their astonishment, an ancient rusty locomotive buried in the muck. The lost engine had been found! As nearly as railroad men could figure it out, she must have jumped the track straight into the soft ooze, where her weight caused her total submersion.

This was one railroad mystery cleared up—but what about the train that disappeared near Pueblo, Col., in 1875 and was *never* seen again? It was a case of one accident after another. First the locomotive had been derailed and because there was no wrecking train near that lonely desert country, the entire string of cars was temporarily abandoned. It was several days before the rescue crew reached that spot and when they did they must have wondered why they had come. There wasn't a car or an engine in sight.

Investigation soon showed that the soil in that territory was as soft and spongy as quicksand. Apparently anything that struck it would be quickly engulfed. So engineers went to work making borings to the depth of 50 feet in the mud. Yet they never found a trace of the train. Even today its disappearance remains a riddle in the history of American railroading.

A lost engine, a lost train—yet both of these seem insignificant once you hear the tale of what happened in Siberia. There a whole railroad disappeared! Twelve miles in length, every tie and every rail vanished completely from the grim, desolate landscape across which they had been laid. Perhaps you don't believe this could happen? Well the sworn statements are still in existence in which officials vouch for the disappearance of this pike.

Early in the 1870s—just about 20 years before the great Trans-Siberian Railway was built by the Czar's government—a group of Russian merchants and bankers organized to construct a road that would provide a detour around the rapids on the Angara River near Irkutsk, Central Siberia. It had been a difficult job to carry freight over this dangerous part of the stream. But with a railroad shipments could be transferred from one boat to another and ferried along the navigable distances.

The proposed 12-mile line ran through a dense swamp region, and gangs did not bother with ballast. They chopped down trees and laid the entire trunks crosswise, fixing rail to a gage of seven feet. The rough-mold iron was spiked to the tree ties . . . and that's all there was to the construction job.

When the railway was completed, an

(Continued on page 10)

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(Continued from page 8)

old engine and several cars were brought in to transfer goods between the two ports of navigation on the Angara River. For a few years the shortline did a huge business, and returned high dividends to the owners. Then a change came. Trade fell off and deciding to abandon the roadway the owners sold the engine to a farmer who converted it into a threshing machine; the flatcars were towed away.

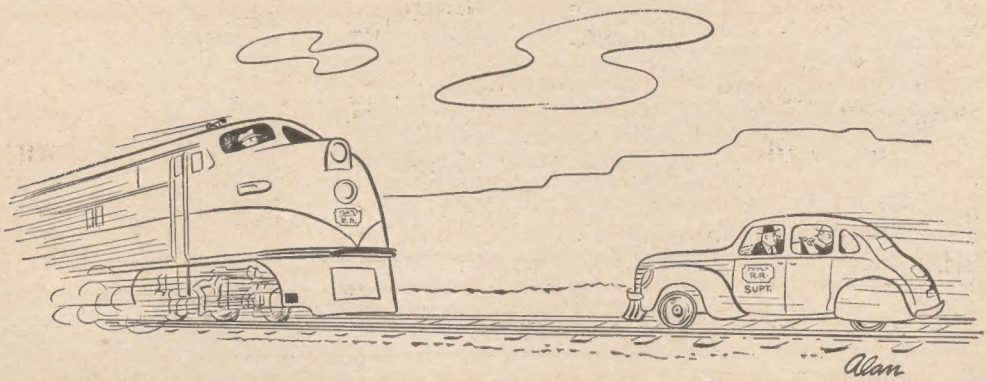
For more than a decade this railway was forgotten. Then the Russian Government decided to build a great railroad across Siberia. Making their way cross-country to Irkutsk, the Czar's surveyors learned of the old rail route across the swamplands. Suddenly the townspeople became aware of the fact that for some time back they had seen no traces of it. So the engineers and surveyors began a systematic search, aided by trappers who remembered its exact location.

A dozen squads of men explored the forest bordering along the Angara River. Curiously enough, they could find no sign of the once-busy line. If they hadn't come upon the two trainsheds—one at either terminal—the Czar's men might have called the shortline a local superstition. Yet these sheds where goods had once been stored, and where goods still lay rotting away, left no doubt that a railroad had previously operated between these two points.

With the terminal sheds as a starting point, it would seem an easy task to find the lost track; but it wasn't. No matter how patiently they dug among the giant firs, they could find neither a sleeper, nor a rail, nor a spike. Systematically they plumbed the soft mud, which yielded nothing. Still not content, they contacted the owners and builders for any information they could give them. Nothing helped. The natives believed an earthquake must have swallowed up the railway, even though such convulsions were unknown in that region. The builders had no idea what might have happened.

When Kypchol, the Trans-Siberian's great engineer, reported this matter to St. Petersburg he declared it the most baffling mystery in railroad history. He had his own theory on its disappearance, however. He believed that the unballasted track had formed a natural drainage conduit through the forest, which in time made the soil very spongy. So during the hot Siberian summers the rails had sunk deeper and deeper into the mud, until they reached the substratum of eternally frozen earth. Borne down by the heavy iron, the tree ties were forced to this level and there embedded in the ground.

Whether this solution is right or not, all records show that Russia's lost railroad created quite a sensation when Kypchol turned in his report to St. Petersburg. And since the Trans-Siberian line did not follow the old route through Irkutsk, the mystery was never solved.



"Make a note of that block signal out of order, will you, Harvey?"

Even the "toot" costs more!

To make the steam which blows a locomotive whistle used to cost about one-third of a cent per "toot." Today it costs at least twice as much.

That's a small thing—but it's typical of the way the cost of running railroads has gone up.

Take, for example, the 3,000 cross-ties in the average mile of track. Prewar, they cost less than $2.00 each, in place. Today, the cost is up to $4.00 each. And the rail—about 175 tons of it in the average mile of track—costs $30.00 a ton more than it did in 1939.

Freight cars, which used to cost $2,500 apiece, now cost more than $4,000. And the prices that railroads must pay for fuel—whether coal or oil—have considerably more than doubled since 1939.

But in the same years the rates that railroads charge for their essential services have gone up less than half as much as the average increases in wage rates and the prices railroads must pay for materials and supplies.

What does this mean to you? Just this—our nation needs railroads which are strong and healthy. That's the only kind of railroads that can produce adequate, low-cost transportation in time of peace—and meet national needs in time of war.

And the only way to have railroads that are strong and healthy is to have railroads whose revenues keep pace with today's increased costs.

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TEHACHAPI

William Hood's Revolving Door to the San Joaquin Valley
Is an Engineering Masterpiece—and an Operating Headache

TEHACHAPI LOOP is one of California's few physical or industrial headaches which the local experts have done little about—except brag. During a century of economic development, deserts have been changed to flourishing fields and orchards, harbors have been dredged and rivers bridged, cities have risen proudly above an earthquake's rift, while rain—under the charm of Chamber of Commerce glasses—has become merely fog. Yet for nearly 73 years the circuit of single-tracked steel which William Hood slung around the Teha-

Schematic view of the Loop. Actually, it takes an 80-car freight with three cab-in-fronters to pass over itself

By CHARLES W. TYLER
and E. M. KENNEDY

chapi Mountains has stood unaltered. And across its rails roll the mainliners of two major transcontinental systems.

With the Bakersfield-to-Mojave trackage under its banner, the Southern Pacific holds the key to all rail traffic moving southeast out of the San Joaquin Valley. The Atchison, Topeka & Santa Fe discovered this discouraging fact late in the 1890s, when with lines east and west of the Tehachapis it sent engineers to survey a feasible crossing of the mountain barrier. Months of camping in the hills, scaling the granite canyons, followed, but failed to uncover a second route. So in 1899 the Santa Fe reached an agreement with the Espee and won trackage rights over the 67-mile approach and descent through

Courtesy Pacific Fruit Express

Pulverized ice will blanket these crates. Huge Pacific Fruit Express plant at Roseville is among world's largest

windswept Tehachapi Pass. Whatever the cost, this contract is one the Santa Fe has never regretted.

Each year the San Joaquin Valley originates approximately 50,000 carloads of perishable products for the Santa Fe. During peak periods of the potato season —from April 1st to July 15th—daily shipments may mount as high as 306 to 587 carloads, seven to ten trainloads. Then before the entire potato crop has been delivered to markets in the East, the grape rush is on: in 1947 Fresno County wineries alone produced more than 28-million gallons of wine. And the grape season lasts from July 10th through December 31st; plenty of time to pile up freight. On rush days it provides three to seven long drags for the dispatcher's scorecard.

Nor is the Southern Pacific left far behind when it comes to transporting produce from San Joaquin, the nation's richest valley. About a year ago the Pacific Fruit Express Company, Southern Pacific-Union Pacific subsidiary, was forced to more than double its capacity for manufacturing ice at Bakersfield—port of embarkation for perishable loads heading for eastern markets via Tehachapi—and to increase track facilities to hold 110 carloads at one time. Since the end of the war PFE has ordered 8000 new freights to up its roster to 40,000 cars, the largest reefer fleet in the world. These are indirect signs of Southern Pacific's harvest time in San Joaquin, but what exactly is the setup at Tehachapi? How does its traffic run?

Because Southern Pacific considers all movement between Bakersfield and Mojave as its sole operation problem, the road's figures include tonnage ratings for Santa Fe trains as well as its own. With this in mind, let's check the record for a typical August day, the busy season. Within a 24-hour stretch, 27 trains moved up the hill, containing a total of 1661 cars. Those were only freights; in addition, the Espee dispatcher had to work in 13 passenger trains, representing 164 cars. And during 1947 the gross tonnage—weight of cars and contents—hauled through the Tehachapis was 26,271,944 tons, comparing most favorably with the wartime peak of 29,372,206 tons in 1945.

THE LOOP at Tehachapi has been variously described as an engineering marvel of North America and a steel-ribbed bottleneck some Chink hacked out of the mountain with nothing but a wheelbarrow and black powder as his tools. Actually it is both. No one can doubt the skill of the engineer who lifted his railroad 2734 feet in 16 airline miles without employing a 3.2 percent grade. Yet few who understand railroad operation think his solution easy, for either the locomotive or the men on the mountain.

When you speak of Tehachapi Loop you mean 32 miles of tortuous single track from the great horseshoe curve at Caliente—foot of the western slope—rising along a 2.5 percent ruling grade through 58 ten-degree curves, cuts, 17 tunnels, over bridges and along switchbacks and high rock shelves, every foot of the way a battle against the treacherous

obstacles nature has flung in the path of man's intrusion. You mean storm country: in 1932 a gulley washer sent the Caliente and Tehachapi rivers rampaging down the mountainside, sweeping railroad property worth $2 million before them. The Loop itself is only the crowning feat of William Hood's efforts: his determination to extend the Southern Pacific southward beyond Caliente when railroad men said it couldn't be done. Hood's success gave California its first railroad linking Oakland and San Francisco with Los Angeles.

This happened in the 1870s. The Central Pacific at this time had a main line between Oakland and Sacramento, but to travel south involved a painful journey by horseback or stage through the ruts of mountain passes. Land grants were being offered for a railroad from Goshen to the neighborhood of the Colorado River, if such a route could be laid; but few men were fighting for the honor. The proposed railroad indicated a right-of-way down through the San Joaquin Valley, an area many "wise men" thought less than promising. Visalia and Bakersfield were its only towns of importance, and these were just villages. Until the Espee railroad builders came, Modesto, Merced and Fresno were not even staked out. To persuade newcomers to purchase the lots around the desolate-looking plain called Fresno nearly a decade later, agents went one better than today's money-back guarantee: settlers or squatters paid no money at all until they decided whether or not they wished to make this territory their permanent home.

For until water could be piped into the

Roseville-bound for loading and icing rumbles a string of orange and yellow reefers. View is near Woodford, northwest of the Loop

Courtesy Pacific Fruit Express

Valley, this section could be profitable neither to its owners nor to the railroad which hoped to find heavy freight traffic. Yet Leland Stanford, C. P. Huntington, Charles Crocker and Mark Hopkins—the Big Four of the Central Pacific—backed the newly-organized Southern Pacific in its drive on through San Joaquin. North of Goshen, the Espee had not even land grants to encourage its construction, although in those days railroads had ways of persuading townships to parcel out land for a free right-of-way. To the highest bidder went the narrow rails of steel, moving swiftly toward Goshen.

Construction was begun at Lathrop on the Central Pacific's Oakland-Sacramento main line on December 31, 1869. Eleven months later trains were running the 20 miles to Modesto. By January, 1872, service was extended as far as Merced, to Fresno that May and Goshen by August of the same year. From then on the Southern Pacific was on safe ground: its way would be paid by large tracts of government territory. In July, 1873, it entered Delano and by November, 1874, the Espee was able to advertise train service to Sumner, 223 miles from the starting point at Lathrop.

Sumner—or East Bakersfield as it was later known—was the end of the easy grade. The Tehachapis lay ahead. Unless William Hood and Col. George E. Gray —Southern Pacific engineers—could toss a tight saddle over them, the Southern Pacific would remain pocketed between the Sierra Nevadas on the north and east, the Tehachapis to the south, the San Rafael and Coastal ranges to the west. Having no alternative, the two engineers went to work on the Tehachapis, while Espee surveyors from Los Angeles were tackling the San Fernando Mountains which had also to be ascended. Weeks were spent exploring the heights before the route was chosen, and as curved as it looked on paper it proved successful in mounting the hump.

Hood is said to have considered his plan only "common sense." Yet for years it has been the marvel of travelers, though the despair of his engineering successors who have been unable to replace the corkscrew windings with a more practical right-of-way. Engineer Hood is supposed to have started his line at the summit of Tehachapi Pass and moved downward, curving his track to the contours of the cliffs and canyons. Wherever he began, however, matters little. The important thing is that the former Espee axman stretched his roadway to 28 miles by twisting it back and forth around the mountains, threading it through 18 tunnels and at one point—seven miles below the peak—looped it over itself to gain a 77-foot elevation on the ascending grade while aligning the rails for a feasible climb to the top, 4025 feet above sea level.

From Tehachapi Pass the railroad looked down 2734 feet to the floor of San Joaquin Valley, to Caliente at the foot of the mountain. With Hood's route staked out and the tunnels indicated, it was a job for the construction gangs. Since the Southern Pacific was in a hurry, Hood and Gray did not even wait for the spring thaw before sending crews up the mountain. They consulted road officials on their plans and immediately set to work grading the line out of Sumner.

YEARS LATER Engineer Hood was quoted as saying that perhaps 60 percent of the cost of building the Southern Pacific through the midlands of California might have been saved had speed not been essential and his crews been able to avoid winters on the mountain. Hood, however, was only an engineer, not even an assistant chief engineer until 1875. So at the decision of officials higher up, the construction gangs took the sharp wind and snow on the hills above Bakersfield during the winter of 1874-1875, their picks cracking the surface of the frozen earth. It was a slow, painful job. But by April, 1875, the Espee was scheduling trains through to Caliente.

This terminal 22 miles beyond Bakersfield was the road's railhead for more

than a year. The gangs moved up the grade toward the summit and the blasting began: 18 tunnels, fills, the wide crown of rail as they came near the peak. There were approximately 3000 American and Chinese laborers working with black powder, then clearing out the rubble with horses, mules and dump cars. Every stretch to Mojave would be railed. When this event occurred on August 8th, the ordeal was over.

Two days later Chief Engineer Gray submitted his annual report to the Southern Pacific officials and stockholders. Its description of the job that had just been completed shows the casual way the men

New York Public Library

Farm on the Central Colony, Fresno. Irrigation brought fruit trees—and croquet—to the San Joaquin Valley. Transformation from grain fields was accomplished by group efforts

day had 24 working hours, except when the violence of the weather drove the workmen to shelter. Stage-coach lines were bridging the gap between the rail line being hammered out of Los Angeles and the road over Tehachapi—98 miles over wagon trails—yet many proprietors in Caliente still wondered if the blasting and filling could ever make a railroad. Could the Tehachapis be tamed?

On July 10, 1876, these men had their answer. The first train rode through to Tehachapi and the tracklayers hurried on toward Mojave. Since June 30th this section had been ready for passenger, mail and freight traffic, and soon the 20-mile

responsible for Tehachapi Loop viewed their achievement. "This—the loop—was accomplished," wrote Gray, "by taking advantage of a nearly conical butte, circling around it, and then tunneling through a spur of the butte over which the line ran in making the circuit. The circuit is made in a lineal distance of 3794 7/10 feet and a difference in elevation where the line crosses itself is 77½ feet . . . It is confidently believed, under all circumstances, this location has been judiciously made, and will stand the test of impartial criticism."

Whatever would be the judgment of time, the Big Four were quite satisfied

with developments on Tehachapi. The toughest part of the groundwork was over and the time for celebration drawing near. Down in the south, headings for the San Fernando Tunnel had met on July 14th, and tracklayers advanced into Soledad Canyon where they were to meet the Tehachapi line. By the end of August plans were finished for the last-spike ceremony. Charles Crocker, president of the Southern Pacific, wanted this to be a day all California would remember.

New York Public Library

Before irrigation. In 1885 lines of teamsters, sometimes a mile long, waited days to deposit their grain in one of the three giant Travers storehouses

Special trains were provided to carry civic leaders to Lang, Calif., some miles north of Saugus, where rails were to meet. There were great expectations of the day a-coming, and the promise of fortunes to be made revived the hopes of those left behind by the gold rush years earlier. Los Angeles had a stake in this venture: it had underwritten a large percentage of the cost to put its city on the Espee's main line. A city of only 5728 people in 1870, with sea lanes considered sufficient for the traffic it could provide, Los Angeles was charted for a site on a branch line until it proved its immediate value to the railroad's top brass.

Finally September 5th came. For the amusement of the crowds tracklaying races were held but the main event was the driving of the last spike by Crocker himself. The Espee president was introduced to the cheering visitors as "the man who superintended the construction of more miles of railroad on the face of the globe than any other person living or dead." Crocker, however, paid little attention to the adulation of his guest speakers. Thousands of newly-imported Chinese laborers admired "Mistuh Clockee" as the man who drove them to record tracklaying efforts along Central Pacific right-of-way, while half their coolie gang shoveled snow to clear the way; rival Union Pacific builders recognized a master construction superintendent who bragged of no engineering skill. But more at ease fighting storms, strikes and physical hazards, Charles Crocker sensibly grabbed up the sledge and went to work without delay.

As his hammer blows rang out, the rails north and south of Lang were swiftly united as the Southern Pacific's uninterrupted main line between Oakland and Los Angeles. On the following day, September 6th, regular train service began with an express which boasted of making the 484-mile run between San Francisco and Los Angeles in about 25 hours. Emigrant trains offered a 35- to 42½-hour schedule. Yet while this inaugurated the

first rail connection between northern and southern California and linked Los Angeles with transcontinental steel via Lathrop, Southern Pacific's job as a public carrier had only begun.

From 1876 to the turn of the century, the struggle for freight traffic was to be a major issue.

ORIGINALLY the railroad chartered to cut southward through the counties of San Mateo, Santa Clara, Monterey, Fresno, Tulare, Kern, San Bernardino and San Diego was called the Southern Pacific of California. It was an apt title. For though its lines were extended eastward in 1877, crossing the Colorado and then onward through the states bordering upon the Rio Grande, waging track races, consolidating with completed shortlines, never resting until the *Sunset Route* could claim New Orleans as a terminal city, still in 1894—when the system was more or less unified—one quarter of its gross earnings was being derived from San Joaquin Valley alone. This was no mean sum. Of the total $34,747,000 collected that year, the share contributed by the Valley amounted to $7 to $8 million.

But as things turned out, the very size of this revenue was the deciding factor in limiting the volume of freight carried by the Southern Pacific. The 1890s were stormy times for California, an era when the charge *monopoly* was shouted from San Francisco street corners and in business meetings; when the San Joaquin region—potentially the most productive in the nation—shipped little to market and was nearly starved to buy the tools and staples it needed, since it cost less to ship products from seaports on the Atlantic 3000 miles by water to the Golden Gate than to send them 350 miles by rail from San Francisco to Bakersfield. In his book *Santa Fe, The Railroad That Built an Empire,* James Marshall quotes the standard rate as 65 cents per 100 pounds for shipping canned goods from New York to San Francisco as compared to 82 cents for the haul from Bakersfield to San Francisco. This offered little encouragement, or profit, for shipment by rail.

Yet it is true that the Southern Pacific invested large sums in developing San Joaquin Valley, and that its coming did

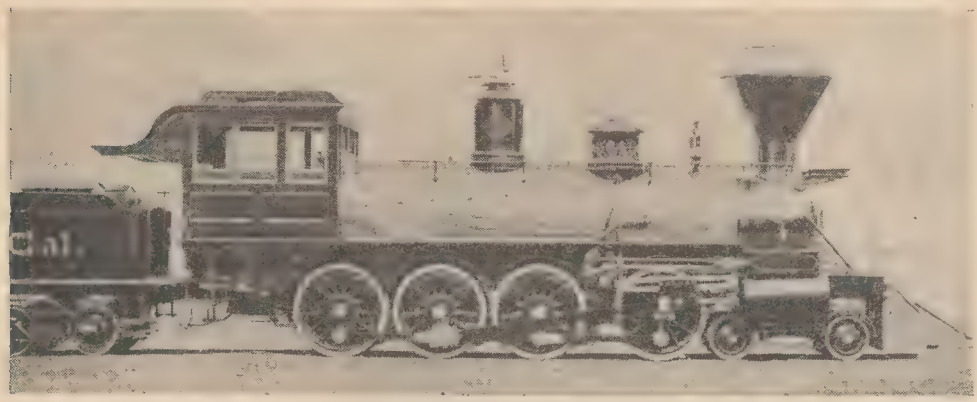
J. C. Hammond, 1629 Morton St., Alameda, Calif.

Crossing the northern end of the valley from west to east, narrow-gage rails of the Southern Pacific of California provided a once-thriving feeder route

change the face of the countryside. When Mark Hopkins and Leland Stanford—two members of the Big Four—rode down through this territory with their surveyors, they found a lonely land. Here and there were the shacks of sheepherders, but the region had in general been abandoned for better grazing land to the south, cities and towns on the coast, or the mines in the north. And even the coastal cities—which might supply freight traffic—were nothing to brag about. Los Angeles in 1870 could count 5728 people and a city valuation of little more than $2 million, while the most profitable enterprise seemed a saloon; there was one for every 55 people in the metropolis. Ten years later Los Angeles had nearly doubled its population. But even then there were only three banks, three hotels, no paved streets and the rare main-street crossing had a gas lamp to safeguard night traffic.

Without this, Los Angeles—already dubbed "the sleepy little Mexican city"—might have stayed 60 miles off the main line of U. S. transcontinentals.

The growth in San Joaquin Valley was another story. Here the Southern Pacific must share credit with the coming of the big ditches for irrigation. There were many years when men could ride from the Kings River to the Millerton without encountering a drop of water between, and the soil was so barren that it's said you could search 20 miles in any direction without locating a bush large enough to permit the cutting of a horse whip. Early stories attribute the naming of Fresno, for example—a Spanish word meaning ash tree—to the presence of a 15-foot ash tree standing alone near the site upon which Fresno Station was erected. They had considered naming this village for one of the railroad backers, since its location was ideal geographically: it was



Tailored for tonnage by A. J. Stevens, this *Mastodon* used separate cut-off valve; hauled train of 14 twenty-ton freight cars up curvaceous 116-foot per mile grades with ease

What paved the way for the development of Los Angeles was the railroad—the Southern Pacific heading southward across the Tehachapis and then west through cuts in the San Fernando Mountains. Los Angeles, however, owes this rail line to the grim determination of an organized group of business men and civic leaders who put their city in debt for $600,000 and turned over the Los Angeles & San Pedro Railroad to Espee backers to purchase a mainline right-of-way.

both the center of California and the center of San Joaquin Valley. Yet the builders doubted the validity of this honor. In 1872 Fresno was a signpost on a barren plain, ten miles from San Joaquin River, the nearest body of water.

Two years later, Fresno was the county seat. The wilderness had not been changed overnight, but there had been vast improvements. Already there were 55 permanent buildings in town, 29 stores and 26 dwellings, most of them carried bodily

New York Public Library

Snow-capped Sierras, 70 miles to the east, pour life into Fresno vineyards at the twist of a valve

from Millerton which the railroad chose to bypass. The irrigation system, sponsored by men like M. J. Church, had pushed canals into Fresno's thirsty flats, and more and more colonists were purchasing its 20-acre lots. The Espee fostered this growth. It was a time when everything from "a pin to a gang plow" had to be freighted in from Stockton, and this meant revenue for the railroad. But just a few years earlier the Southern Pacific had offered to auction off some choice sites to settlers only to be forced into permitting squatters to live there so as to improve and test the fertility of the land before committing themselves to any cash payments. The community planning put an end to this hesitancy, even though the farmers believed any fortunes would be slowly earned.

In 1880 there were 1112 people in Fresno City, described as another of California's "pretty railroad towns." Sales at the depot amounted to $1529.95 one month and during this same period the freight revenue totalled $5000. From cattle grazing and planting grain, farmers were becoming interested in orchards and vineyards for their livelihood. The Fresno Canal & Irrigation Company had become an actuality and Kings River was watering more and more of the 3½-million acres in Fresno County. As a result, between 1880 and 1890 the town's population jumped to 10,818, while the county showed an increase of from 9478 to 32,036 people. Fresno, center of San Joaquin Valley, began to show signs of eventually cornering the market for dried fruits, as well as producing a sizable wheat crop. It would be years until eastern shopkeepers and neighboring states would know it as the *Garden of the Sun,* but the foundation for that title had been laid.

Ahead lay a giant struggle with the Southern Pacific, the agent which had fostered its growth and was now threatening to throttle it financially. Exorbitant freight rates made it impossible for independent growers to profit from their year's labor. The rails which had been so painfully hammered up over the Tehachapis, that had been laid in the hole blasted through the San Fernando Mountains and hailed as the tie line to offset the isolation of southern California, had now assumed the role of an inflexible monopoly. The price of land rose from $2.50 to as high as $30 per acre; men in the Valley hungered for manufactured goods which they might have purchased had they been able to swap perishables in return. Up north at Mussel Slough the fight between farmers and the railroad

caused an outburst which resulted in the killing of seven men. Spurred by this tragedy, the situation was brought to a showdown.

There was only one way to abolish the Espee stranglehold—bring a rival into San Joaquin Valley and tumble the freight rates by competition. San Joaquin farmers would build their own line. They were not without powerful interests to back them, either. San Francisco labored under a similar difficulty, for only the Southern Pacific served this metropolis and thus could dictate all policies; but were services to be offered by a second carrier, the citizens and industries would both benefit. So on January 22, 1895, a Chamber of Commerce meeting in San Francisco took matters into its own hands. These were the men who would suffer or profit most from lowered freight charges.

THAT MEETING got off to a slow start until Claus Spreckels, tycoon of the sugar industry, put financial power behind the movement. Spreckels and two sons, John D. and Adolph B., contributed $250,000 to the venture, and following their lead industrialists, bankers, every big name in the city or its surrounding area wanted to share in the new carrier. Within a month over $2¼ million had been pledged and on February 20th the San Francisco & San Joaquin Valley was chartered.

This announcement brought great rejoicing to the Valley. Torchlight parades were held, cannons exploded, saloons were crowded with speech-makers, prophets of the great day coming. The counties through which the railroad would lay its track came forth with offers of all the land needed and promises to buy bonds. And along the proposed route towns grew up in anticipation of the SF&SJV, the assurance that San Joaquin growers could earn a living.

No time was wasted before starting construction, and on July 22, 1895, a ground-breaking ceremony was held at Stockton. It was vengeance for Stockton's inhabitants, who had listened to the Espee threat that grass would grow in their streets—because they refused to contribute free land for station operations—and had seen Lathrop built up in competition to its growth. But it was this sense of retaliation that sped the 62½-pound steel down San Joaquin Valley.

By October, 1896, the San Francisco & San Joaquin Valley had laid 123 miles into Fresno and on October 5th service was begun. John Armstrong rode the first train into Fresno, a string of eight coaches and combination passenger-baggage cars, gaily decorated with festoons of flowers and streamers, while the newly-purchased Baldwin *American* shone with highly-polished brass. It was a holiday for all the towns along the right-of-way. But when the *Emancipator,* as that Valley train was known, pulled into Fresno at about 1:30 that afternoon, the place went wild.

For months the celebration continued. That first run had taken five hours and 23 minutes to complete the trip, and traffic was heavy from that day on. The following May the SF&SJV reached Hanford, 30 miles south; four months later it entered Visalia; on May 27, 1898, rails were in Bakersfield. William B. Storey, an Espee surveyor and builder, was chief engineer for the Valley road and although he had marked down several possible routes through the Tehachapis, he knew that the Southern Pacific operated the shortest, easiest route. Instead of expending large sums on blasting a secondary line, he advised a trackage agreement. So the Valley stretched its rails to Kern Junction and then crossed onto Espee rail for 68 miles before joining the Santa Fe at Mojave.

This done, the new builders turned their attention to the eastern end. Between Stockton and San Francisco lay the Coast Range barrier and beyond that the eastern arm of San Francisco Bay. Yet Storey's men hacked away at these obstacles: filling in the swamps and tunneling the hills until in 1900 the way was clear for through runs between San Francisco and Chicago, with a ferry connection at East

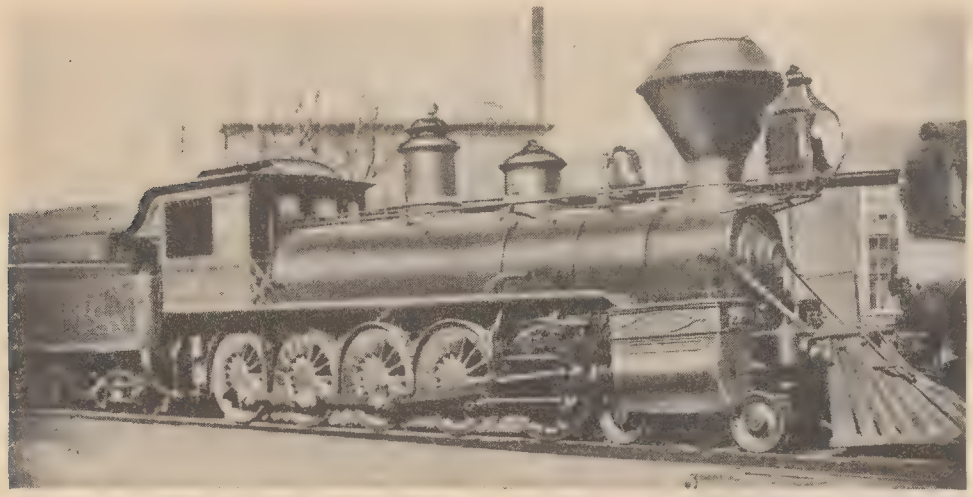
Bay linking Richmond Terminal with the Golden Gate city. But by this time the San Francisco & San Joaquin Valley was an integral part of a through carrier. In December, 1898, the Santa Fe had leased the Stockton-Bakersfield trackage, which it consolidated into its system in 1901. The legal status of the Valley road, however, mattered little to the farmers along its route. They only knew that on the morning of July 6, 1900, the *Ocean Wave* was to leave the Market Street slip at eight o'clock for a meeting across East Bay with a waiting engine which would

Monopoly buster. Not until Spreckels-sponsored San Francisco & San Joaquin Valley drove competitive steel south from Stockton was the Valley assured of a place in the sun. *Above:* SF&SJV's *San Mateo*. *Below:* Rival Central Pacific's 173

start down San Joaquin Valley with the Santa Fe's first train through this territory.

When the *Ocean Wave* pulled out that sunny morning, there were about 250 aboard, and thousands of men and women cheering her from the ferry quay. Forty minutes later she arrived at Richmond, and her passengers scrambled into

the coaches and Pullman of the waiting train. Baggage was carted off the ferry and loaded quickly. Then Conductor Anderson waved a highball to Engineer Comstock who eased out the throttle of his Dickson *10-wheeler*. Amid the ringing of bells and blasting of the ferry whistle, their schedules to meet the demands of the shippers. But still the Southern Pacific held the key to all exit southeast through the valley. From Kern Junction as far as Mojave, Sante Fe found it necessary to use William Hood's trackage ascending to Tehachapi Pass via the world-



Largest engine in the world in 1884 (Baldwin built a bigger one for a Brazilian railroad one year later), CP's *El Gobernador* was off the rails as often as on them

Santa Fe's first train south through San Joaquin Valley got under way. It would pass a local passenger heading from Stockton to San Francisco, before it came upon the crowds of farmers gathered at the small stations between Modesto, Merced, Hammond and south of Fresno. And before the day ended, the first through train from Chicago would pull into Santa Fe's Richmond Terminal.

Not one of these trains passed unnoticed. Schedules had to be set aside to stop at places to let the jubilant watchers present their bouquets of flowers to the trainmen and passengers, to rub hands along the sleek sides of the engines. Then the celebration over, they turned contentedly to their land, to labor the ground which had more than tripled its production in the last eight years.

In 1899 San Joaquin Valley sent 92,320 tons of dried fruit, 1,948,368 cases of canned fruit and 25,200,000 bushels of wheat to market. And now there were two railroads to haul this produce, to step up famous Loop which remained the shortest, most practical passage.

If there had ever been doubts that Tehachapi Loop would "stand the test of impartial criticism" that day was over.

DURING the next 20 years passenger and freight traffic along the Southern Pacific's San Joaquin Division created its own problem. No single track could possibly handle the tonnage which shippers were unloading at the freight centers of two transcontinental railroads. The first world war demonstrated that. By the time hostilities had ended, Espee officials had before them blueprints for new track work. Since Southern Pacific managed the dual Santa Fe-Espee operations on Tehachapi's big hill, it was up to this road to solve the difficulty. Early in 1919 tracklayers moved to Bakersfield; Kern Junction to Magunden was the location of their first job.

When this 3-mile stretch was laid with steel in August, 1919, the Espee prepared

to line the grade to Sivert. After some delay, 1922 saw two double-track projects: the 7.9-mile segment from Magunden to Sivert, the 9.2 miles between Tehachapi and Cameron at the opposite end. A year later there was double iron between Cameron and Mojave, then for three years other plans put a halt to this advance. But in 1928 the work was completed with the Sivert-Bena track. The approaches to Tehachapi Pass now had 34.2 miles of double-track territory.

Yet between these—Bena and Tehachapi—lay the most torturous and well-worn 32.31 miles of single-track line on the Southern Pacific. It seemed that nothing could be done about it. Whatever force had carved out the topography of the Tehachapis had allowed one loophole to remain through which rails might escape over the mountain, but even this was not wide enough to permit two trains to whirl round and past each other. So Southern Pacific and Santa Fe put heavier loads on bigger and bigger engines; they were determined to keep the cars of timber, fruit, vegetables, manufactured goods, oil, minerals and wine moving steadily out of the Valley area and from farther north. When necessary, several locomotives were coupled together or placed at the front and rear of freight trains. It was not extraordinary for freights to double end over end swinging around the 3975-foot Tehachapi Loop. A train of more than 80 cars could manage it, with its engine heading east directly above the caboose entering the tunnel below.

Since shortly after 1910, the Espee has had cab-in-fronters on the hill. These *Articulated Consolidations* had been tested earlier on the Sierra Nevada engine-mauling run and their tremendous power proved the answer to the problem of tonnage on tough grades. The reversed position of the cab safeguarded engineers against gas poisoning in tunnel territory; the mammoth drive suited motive-power officials. But these engines were the result of 35 years' development; the small diamond-stacked *8-wheeler* which chugged slowly up to Tehachapi Pass on August 8, 1876, bound for Mojave and Los Angeles had been many years a-growing.

Between times, engineers fought Tehachapi with the *10-wheelers*, the first freight engines used on this run. These had 57-inch drivers, 18x24-inch cylinders and a weight of 92,000 pounds on their drivers. In 1880 the road bought some *12-wheelers* known as "Cooke hogs." With one exception, these latter represented the heaviest type of locomotives in operation there until 1895.

The never-to-be-forgotten exception was *El Gobernador*. A. J. Stevens, superintendent of motive power, had this 4-10-0 giant built in the Sacramento Shops in 1884 and during the time she shuttled between Bakersfield and Summit, the locomotive was on record as being the largest in the world. Even her builders considered it unsafe to turn *El Gobernador* on the mountain: the engine was run downhill backward. Special instructions were issued requiring all opposing trains to take siding when approaching the monster, which had a known propensity for derailments. A hand-picked crew rode her up and down the Tehachapis with a regular load of 24 cars—about 500 tons.

But soon enough this behemoth proved too heavy for much of the track and many of the bridges and fills, while her capacity for generating steam was inadequate to meet the demands of her huge cylinders. In 1894 Southern Pacific scrapped this locomotive. One year later the *12-wheelers* were in charge of all freight over the hill.

Motive power in Tehachapi country today is undergoing the same change being experienced by railroads from coast to coast—the swing to Diesels. Yet for months, if not years, to come the labored thunder of the *Simple Articulateds*—or *Articulated Consolidations*, as Southern Pacific calls them—will be heard on the Tehachapi Subdivision's heavy grade. The AC-1s, AC-2s and AC-3s—"mudhens" of the 4000 Class—are Espee veterans, outshopped by Baldwin between 1909 and 1913. So successful were these engines

in battling Tehachapi that during 1928 and '29 the 4100 and 4125 Class appeared on SP's roster as AC-4s and AC-5s. From 1930 onward, groups of these *Articulateds* have been purchased, comprising AC-6 through AC-12, or Class 4126-4294. The latter can boast a drawbar pull or tractive effort of 1,234,400 pounds.

Articulateds are used in helper and passenger service. Some *Mikados* lend assistance for the latter chore, but the usual operation is for an AC-type engine leaving Bakersfield for Los Angeles to be provided with an AC helper from terminal to terminal; in addition, an AC helper boosts the train from Bakersfield to Summit, where it is cut off and returned light to Bakersfield. On movements from Los Angeles to Bakersfield, an *Articulated* engine and helper run together from terminal to terminal, requiring no assistance when approaching Tehachapi from the east. Until the late summer of 1948 Espee assigned no Diesel road engine to a regular schedule across Tehachapi. Starting last October, however, six big Diesels moved into the field. Running between Bakersfield and Los Angeles, steam helpers are coupled on when hitting the grade for Summit; between Los Angeles and Bakersfield, the Diesel-electrics go it alone.

The Santa Fe—one of the nation's greatest Diesel enthusiasts—had 5400-horsepower Diesels on the Espee's Tehachapi Subdivision long before Southern Pacific began experimenting with the *Growlers.* Four-unit Diesels haul most Santa Fe freights eastward from Bakersfield, using two 3800-Class *Santa Fe* steamers as helpers to Summit; they regularly handle in excess of 72 cars, limited by the maximum which is imposed by the capacity of sidings in CTC territory. Helper assistance is also provided for westbound trains between Mojave and Eric, eastern slope of the ridge. The AT&SF employs steam power in passenger service to a great extent in the Tehachapis, Class 3751 *Northern* engines front-ending the trains. These are augmented by the 3700 Class 4-8-2s.

Map of Tehachapi Subdivision. Insert shows its key position on Valley routes

TEHACHAPI'S CTC territory is the product of World War II. No postwar investment, the million-dollar installation of Centralized Traffic Control was the only solution railroad men could offer to the problem of carrying an impossible traffic load during the emergency. Years earlier Southern Pacific had abandoned hope of double-tracking the grade between Caliente and Summit; where the broken terrain did not throw up grade barriers, the erosive soil along Tehachapi Creek—the only feasible track location—would not

support a second main line. The best engineers could do was construct a series of sidings which, when remotely controlled from a central office, would provide meets on the hill without the accompanying loss of time due to full stops.

Before CTC there were six 24-hour offices between Bakersfield and Summit:

Usual Espee practice is to cut in second AC helper engine 10 cars ahead of caboose. Santa Fe freights are generally head-ended by four-unit Diesel power

Bena, Caliente, Bealville, Woodford, Marcel and Tehachapi. The new installation put remote-control sidings at all stations except Bakersfield, tying these passing tracks into the main line in such a way that the engine of an eastbound freight would go into the hole at Bealville before the caboose cleared the siding at Allard. Yet before the double-tracking had been completed in 1928—east and west of the critical bottleneck—two dispatchers were on hand for every trick during the busy season, when 500 orders would be issued round the clock. But during the early war years a dispatcher counted on passing out 100 train orders during his regular 8-hour trick. The pace soon tested the endurance of mountain men.

Ask J. R. Matthews, second-trick operator at Tehachapi, what his job was like before the "push buttons" came. "We used to handle quite a few flimsies," he'll tell you with a grin, ". . . . quite a few. I've handed up 72 copies to one train—five engines and a caboose. And when the government started throwing troop specials at us, along with extra sections of Santa Fe and Espee crack trains . . . well!" What more could you say!

Working on the hill called for rugged determination to make good, as far as trainmen were concerned. "We used to beat the soles of our shoes off," says Brakeman Carl Akers, "running to open and close switches. Still that was nothing compared to the job of setting up and turning down retainers. At the end of a run a guy just *fell* into bed."

In other times there might have been a great celebration to mark the opening of CTC at Tehachapi; but on June 1, 1943 the U.S. was at war. For 12 months construction crews had been preparing for this day, when the 32.31 miles between Bena and Tehachapi would be placed under the thumb of a dispatcher in Bakersfield. Espee brass hats had no doubts as to the efficiency of this system, which had already unraveled some of the tightest snarls on other divisions. By exploiting the capacity of six single and six double sidings—most of them long enough to hold the longest AT&SF and SP trains—they could step up movements 50

Opposite page: **Pouring it into 'em. Brace of Santa Fe 2-10-2s gets out of Mojave with Extra 3836 West. (Smoke by special arrangement with engine crews)**

Right: **CTC man flashes the "green" and Extra 4226 East blasts her way up the western slope of the Tehachapis. Engines have just taken on water at Woodford**

Below: **Santa Fe extras meet on the Loop at Walong. AT&SF holds trackage rights over San Joaquin Division from Kern Junction to Mojave**

H. L. Kelso photos

percent, if not more.

During two war years an average of more than 60 trains or light engines were run over the hump every 24 hours. On peak days more than 100 movements were registered in the Bakersfield machine, for in addition to the east- and westbound passenger trains, as many as 32 freights rolled through the pass and returning their helpers was a separate operation. Wheeling these boosters downhill was a problem in itself, traveling as they did against the main current of traffic. As many as 16, sometimes even more, would be coupled together for the drop to Bakersfield, because helpers on the mountain meant a loss of man hours and engine hours. And dispatchers had delays enough to cope with—stops to cool car wheels, to turn up and down retainers—for safe running. They knew what mountain crews were up against trying to lift 6000 tons of engine and freight up to

Left: Tehachapi Subdivision has its emergency road-repair crew, working out of Bakersfield Shops. *Left to right:* S. Gardea, Geo. Bess, G. E. Curry, R. Gonzales and J. A. Henry

Opposite page: Even 10-car *Grand Canyon Limited*, hauled by 3770 Class 4-8-4, requires a helper on western slope of the mountain. She and 2-10-2 No. 3855 were making an effortful 25 mph. when H. L. Kelso took this photo

4000-foot-high Tehachapi Pass and then lowering the weight gently down the other side. If these hardships were unknown to them, these men would never be working at Bakersfield.

Espee's depot at Bakersfield is the nerve center of the entire San Joaquin Division. B. W. Mitchell, who began railroading at eighteen, superintends the 245-mile district between Fresno and Saugus, which consists of 835 miles of main- and branchline steel. Behind the scenes there, too, are Chief Dispatcher P. E. Turner and five dispatchers. G. C. Derryberry handles the Valley district, including Goshen Junction to Fresno and all branches; U. H. Pierce, the Bakersfield-Goshen Junction trackage; L. G. Fell, the Saugus district; H. E. Wood, the Mountain district. Back in the CTC corner is Kenneth L. Galyan, who mans the "button job."

It's no idle boast that Galyan knows every curve, grade, tunnel, cut and fill on the Tehachapi line; he must know the quirks of every engine and engineer as well. Short of an "act of God" there is nothing which could influence safe train operation there that is outside his department. Tonnage, breakdowns and line interferences, these are forces he must battle with and come out on top—and on time. Knowledge and experience give him the answers to difficulties in the first two categories; the Southern Pacific has tried hard to eliminate the road blocks.

To insure the roadway against wrecks and delays caused by rock slides, the Espee has erected slide-detector fences in the danger area. These record all breaks in the line and prevent derailments, loss of life and damage to road property. To safeguard its passengers and rolling stock, Southern Pacific has also located its right-of-way as far from the dry beds of Caliente and Tehachapi creeks as possible, for there is no telling when these mountain streams may go on the rampage. As for warnings of faulty equipment or dragging parts, Galyan can depend upon the operators along the line for his news.

One feature of the CTC machine is a row of 15 telephone-ringing selectors, which link the control panel with various locations on the hill. This on-line communications system has proved invaluable as a timesaver. At any moment the dispatcher may hear a bellow come from his loudspeaker, while his eyes are fixed on the lighted track model which gives him the information he needs to set up a meet by throwing several switches and signal levers, pushing the code-starting buttons.

"Board sticking out about four feet on the fireman's side of that Santa Fe job," booms an op at the other end. "It's in front of the helper."

"Okay," Galyan replies. "I'll tell him at Woodford."

The dispatcher then rings Woodford to relay the message—all steamers must stop there to take water. Galyan gets an okay from the operator, then for a few moments his corner is quiet. Suddenly the loudspeaker comes to life again. "The head brakeman is out here now," Woodford informs him. "They'll take care of it."

Warnings are not the only messages that are wired through to the CTC dispatcher. It may be a section foreman wanting protection for his motor. Then Galyan will pick up his transmitter, study the lights on his board and consult the clock. When he provides the foreman with rights, he will set up the necessary protective signals and lock the code-starting buttons with a red metal clip. Then the blinking lights may distract him; the deep whistle of the *Articulated* preparing to leave Woodford is picked up by a track-side microphone and tossed into his ear, followed by the hard slams of the cab-ahead's laboring exhausts. Talk about the smoke orders of old—out on Tehachapi an engine can register her own OS. The dispatcher can expect a loud confirmation of the lights on his CTC board.

That central layout is one of Tehachapi's most valued properties. To protect the panel against destruction should fire ever sweep through the wooden station in which it is housed, the cabinet is mounted on rollers and provided with a detachable plug connection. These make it mobile on a minute's notice. While the machine is said to have cost approximately $30,000,

(Continued on page 34)

H. L. Kelso photo

Stock train eases down the hill. During the war as many as sixty train and helper engine movements were recorded during a twenty-four hour period

Collection of A. Parsons, 6328 Cedar St., Huntington Park, Calif.

Looping up the spiral from Bridge 5. Extra 4119 East crossed over this structure three minutes previously, on tortuous, 136-foot per mile ascent

(Continued from page 31)

no one will hazard a guess as to its actual worth. However, they do know that it would require two years to replace it.

EXTRA 4257 EAST has been called for 11 a.m. out of Bakersfield. Suppose we climb aboard and take a close look at the main line William Hood and Col. George Gray drove into the Tehachapis in 1876. Superintendent B. W. Mitchell and General Manager J. W. Corbett provide us with signed credentials and we amble along to the yard in plenty of time to see what engines are on the roundhouse lead tracks. Three big cab-in-fronters and a *Mikado*—grimy old gray-backs—stand ready, steam trailing from their cylinders. The consist is being made up in Lower 5, so we continue our hunt for the conductor.

The first man we see when we enter the caboose is Superintendent Mitchell himself. He's riding the freight over the Tehachapis, because the 4257 is running a water test and he wants to be on hand to check her. Conductor R. A. Williams is the skipper and he comes aboard to give the head end the highball at eleven sharp. Up front Engineer Graf eases out his throttle and we leave town.

Extra 4257 East is hauling 85 cars—8116 Ms. An *M* equals 1000 pounds back of the tender and the 4126-4294 Classes have a rating of 2700 Ms eastward across Tehachapi. As we wheel down the long tangent out of Bakersfield, the hills ahead begin to take shape. Left and right, for acres beyond the right-of-way, we pass olive groves and orange groves, stately rows of palm trees and several big fields of cotton.

While we're scanning the fertile countryside, Superintendent Mitchell drags a chair to the rear door, camping there to keep a close watch on the track we leave behind us. He has a wave for every man along the way and they return a friendly grin. Carl Akers, who is braking the rear end, railroaded under Mitchell when he was trainmaster. With a nod toward the super, he leans across to explain, "If you do your job, he's a great man to work for."

The elevation at Bakersfield is 414 feet. Nearing Milepost 321, we begin to feel the drag of the lifting grade. The long tangent ends as we swing into Sand Cut at the edge of Kern Mesa. Sixteen miles east of Bakersfield the line enters Bena, the end of our double track and the beginning of CTC territory eastbound. From here on, enginemen must watch the signals for orders to change speed or take siding. Written train orders are a thing of the past.

From Bena to Tehachapi the speed limit for freight trains is 20 miles an hour, traveling in either direction. Having gained 458 feet in elevation since we left Bakersfield, we're approaching the Tehachapi foothills. Extra 4235 West is in the hole for us at Ilmon. Soon we slow, however, then stop, waiting for two 3800-Class Santa Fe 2-10-2s that are returning from helper trips uphill. Caliente is only a few miles beyond. There tremendous fawn-colored hills tumble down to shut in the town. This is cattle country, and as far as we can see cattle trails cross and recross the mountain sides.

For the next 25 miles, Southern Pacific trackage follows a pattern quite similar to those cattle trails. Approaching Caliente we hole under Tunnel ½, built when the track was relocated at a safer distance from Caliente Creek. For whenever it rains, water rolls down these hills in a great hurry. Not even heavy ties and steel can withstand the pace and fury of the torrents.

Now the train winds sharply around the great horsehoe curve at Caliente. The thunder of the engines working at maximum power echoes and re-echoes from opposite legs of the curve. As we reverse our direction, looking ahead from our perch on the left-hand side of the cupola, we get a last glimpse of the full length of our train. Next time we see the cars strung out, Tehachapi Summit will be far behind.

In front of our caboose are six cars of sugar beets. The rear helper is cut in

H. L. Kelso photo

Empties and loads meet at Rowen, and Espee records another dividend from its $30,000 CTC panel

directly ahead of these. Now the belting exhaust of this locomotive is the only one of the four engines we can distinguish, for the others are wrapped around the hills beyond. Darkness falls as we dig into the hills at Tunnels 1 and 2. In the daylight again, we crowd between steep, sooty slopes which lift scarred rock terraces high above the narrow right-of-way. Even the rear helper is playing tag with the jutting buttresses now, escaping from our sight. We are alone with six carloads of beets, but the smoke of those laboring engines still lies heavily upon the landscape.

Rounding a sharp curve our attention is drawn to an *Articulated* crawling along a great escarpment to the left. She's traveling east, while we are headed west. Through a gap in the hills ahead and off to the right, we catch sight of our train moving southward. But this is single-tracked country and there is no siding here. The brakeman alongside notes our bewilderment. "That's the head end off there," he says pointing to the engine above us. This is the first clear picture we've had of Number 4257 since we left the home yards.

All around us rise the Tehachapis' numberless round domes. It's September and the slopes are a drab brown. If this were spring, the fields would be green and aflame with blue lupine and brilliant yellow poppies. We are climbing still. At Allard we meet AT&SF Extra 132 West. The engines keep blasting away at the grade and soon Allie Sims, the swing brakeman, calls out, "Going into the hole at Bealville." It's here we witness the know-how of Dispatcher Galyan, who is running the hill from Bakersfield.

WE'RE in the clear and still moving through Bealville siding, when Number 51—red-and-orange *Daylight*—comes drifting down the main line for a running meet. She passes and our Extra 4257 East crosses back on to big steel to bore

H. L. Kelso photo

Early morning sunlight dabs the sides of swaying boxcars on the Loop. AC helpers will cut off at Summit, cross through the wye and return to Tehachapi for orders from Bakersfield to run light downhill

through Tunnels 3,4,5 and 6, east of Bealville. On a high curving shoulder we look down upon a miniature train twisting down the ridge. There are times when the Tehachapis seem crowded with trains, for it seems inconceivable that one main line could wind among so many hills, turn in so many directions, and yet advance along what men call the "shortest, most practical route."

"Take a look at 51 down there," Conductor Williams shouts up. Our train is mounting on a high, swerving shelf near Cliff. Below, the cars of Number 51 are a bright splotch of color against the gray velvet canyon floor. The *Daylight* we met at Bealville is entering the horseshoe curve at Caliente, 1000 feet beneath us.

In quick succession we enter Tunnels 7 and 8, climbing steadily toward Woodford, where all steamers must stop for water for the final drive to Summit. The train slows, but our rear helper keeps blasting away to keep the slack bunched ahead. But soon this *Articulated* slips down and shuts off. The freight is hardly stopped when Superintendent Mitchell is out of the caboose, climbing on to the tank of the rear helper to measure the water. Not long afterward, Mitchell is at one of the water spouts and is clasping the hook. He has the spout twisted around before the fireman gets back.

Woodford has four water columns, spaced so as to provide the greatest speed and efficiency possible for taking on water. Cuts are made ahead of each helper and these engines take over the air on their individual segments. The big AC locomotive moves ahead, the helpers drop back, each spotting her tank at the nearest column. Hand brakes are set on the caboose and on the last car of each cut.

Once the water tanks are filled, the extra is recoupled and the air pumped up. The brakes are tested and the cars checked, then Engineer Graf sounds a twin blast of his whistle. Remembering the dispatcher in Bakersfield we search the right-of-way for any signs of the communications system; high on a pole is a microphone, which relays the whistle to the speaker on the CTC machine. Galyan knows that Extra 4257 East is leaving Woodford. Four mighty engines are thrusting themselves against the mountain, pulling or pushing 85 cars uphill.

Not far from Woodford, the extra makes two of its seven crossings of Tehachapi Creek. The track bends in a long horseshoe curve, then turns back along an *S* through a deep cut. As the rails cant to the left and reverse direction, we see a cab-in-fronter blasting along a fill above us, not a stone's throw away. She's traveling in the same direction as our caboose and we read her number, printed boldly in white—4257.

This is the Loop! Extra 4257 East is crossing itself 77 feet above the lower track level at Tunnel 9. As the caboose follows around Tehachapi Loop, we look down upon Woodford and watch a blue-and-yellow Santa Fe Diesel winding up the grade behind with a long cut of reefers. As we circle the famous butte, we notice a parallel track doubling beside us; the greater part of the Loop is tracked by a siding, so it is not uncommon for a streamlined *San Joaquin* or *Sacramento Daylight,* or *The Owl,* to whirl by another passenger or lumbering freight here, each running non-stop. With two trains on the Loop, you could stand near the tunnel opening and think you were seeing four trains moving in four directions. And if you knew the right location, you could look down upon five separate stretches of Tehachapi track miles apart.

Walong comes next, with its 104-car passing track. Southern Pacific freights vary between 65 and 100 cars, Santa Fe freighters average 72 cars, so Walong can hold the longest trains either road dispatches across the mountain. Our caboose blacks out in Tunnel 10. Up ahead the four locomotives are driving hard for Marcel, then on through Tunnels 14, 15, 16 and 17 to Cable. There's an urgency in the dynamite blast of their exhausts. We pass a sheepherder—a work train—and then the grade begins to level off as we approach Tehachapi. The operator is out as we ride by the depot, his hoop

raised with orders. Tehachapi is not only the end of the steep climb, it's the end of the CTC territory eastbound. Our extra moves on to Summit, where it stops to cut out its helper. This engine will cross through the wye onto the westbound track and return to Tehachapi.

H. L. Kelso photo

Diesel-powered Santa Fe Extra West in hole for *Grand Canyon Limited*; Southern Pacific Extra West above them

At Summit the brakemen walk along the car tops setting up retaining valves to keep the freight under air pressure for the drop down to Mojave. This is a 20-mile descent on sloping track; as many as 700 brakeshoes may grip the wheels of the train, while the engineer keeps a careful watch on the speed. Left behind are the oak trees of the Valley; Joshua trees, low shrubs and brilliantly-hued wildflowers announce our approach to desert country. There are stretches of straight track now. Several miles from Summit we roll through Monolith, where ghostly Portland Cement plants have cloaked the landscape with a gray mantle. The engineer pinches his brakes. The long tangents and easy curves add up to a 2.34 percent grade, and control is a grim necessity.

Halfway down, Engineer Graf makes a full stop for the crew to inspect the journal boxes and heat radiation—wheel cooling. But as soon as his trainmen give the go-ahead signal, the train moves down the hill. The front end is keeping a firm bridle on the heavy freight, so we descend slowly to Mojave. Here the Southern Pacific and Santa Fe tracks diverge. The Espee turns south, then west through the San Fernando Mountains; the Santa Fe bends eastward toward a double-track main line at Barstow. But for Extra 4257 East the great journey across the Tehachapis is over. Just 102 miles away, at the end of the 6975-foot San Fernando Tunnel—second largest in the U.S. when built—lies Los Angeles, goal of William Hood just 73 years ago and terminal for the freight we're riding.

THE FUTURE of Tehachapi rails is problematic. Several years ago a group of engineers proposed an ambitious plan to combine a railway and highway tunnel—26 miles long—through these

granite hills. If this were seriously considered, it would mean the end of William Hood's famed—if not named—Loop, as well as the blacking out of a number of the scenic wonders of our western states. At present, however, it appears safe to assume that Tehachapi Loop is here to stay. The cost and the dreariness of the tunnel project have little captured public fancy. The future of the Southern Pacific main line there lies in its ability to absorb without hazard more and more traffic.

The peacetime record of trains crossing the Pass is averaging 54 movements a day, only six below the wartime figure. One explanation of this decrease is the current use of heavier motive-power units, which has reduced the number of light engines returning from Summit. So with CTC having raised the potential for freights and passengers through the mountains—some say as high as 80 percent—the question for Espee and Santa Fe railroaders is not *can* they haul additional trains but *where* they will tap this traffic.

San Joaquin Valley—Garden of the Sun—is the answer to revenue problems. According to the Fresno Chamber of Commerce, during 1947 Fresno County alone shipped 19,051 carloads of fresh fruits and vegetables out of this area. And perishable goods are only one part of the Valley's annual production, the value of which is nearing $1 billion. Fresno is the distribution center for the wine, petroleum and hydroelectric industries, for the travel and tourist trade, as well as the location of the nation's largest winery and the world's largest dried-fruit packing plant. A year ago Fresno wineries produced more than 28 million gallons of wine, and production is constantly being stepped up; within recent years frozen foods have added hundreds of items to the shippers' lists. There seems no limit to what the Valley can produce.

With the population, production and sales within San Joaquin Valley growing each year—with the thousands of carloads of freight moving into the area exceeding the long trains drawn out to markets in middle and eastern U.S.—Californians are finding in the Valley the *El Dorado* they bypassed in their hasty search for gold. Santa Fe and Southern Pacific are prospering with them. The hills above Bakersfield are circled with the slow winding freights, as Tehachapi Loop opens the back door of California to greater prosperity.

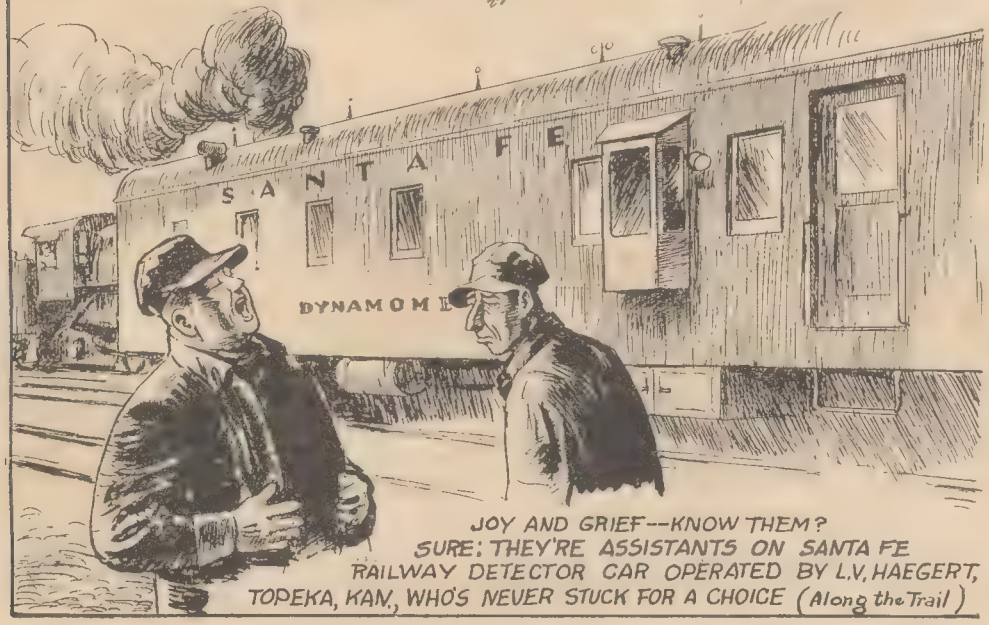
Ten-car train of perishables gets a boost from ancient Santa Fe 2-10-2

H. L. Kelso photo

ALONG THE IRON PIKE

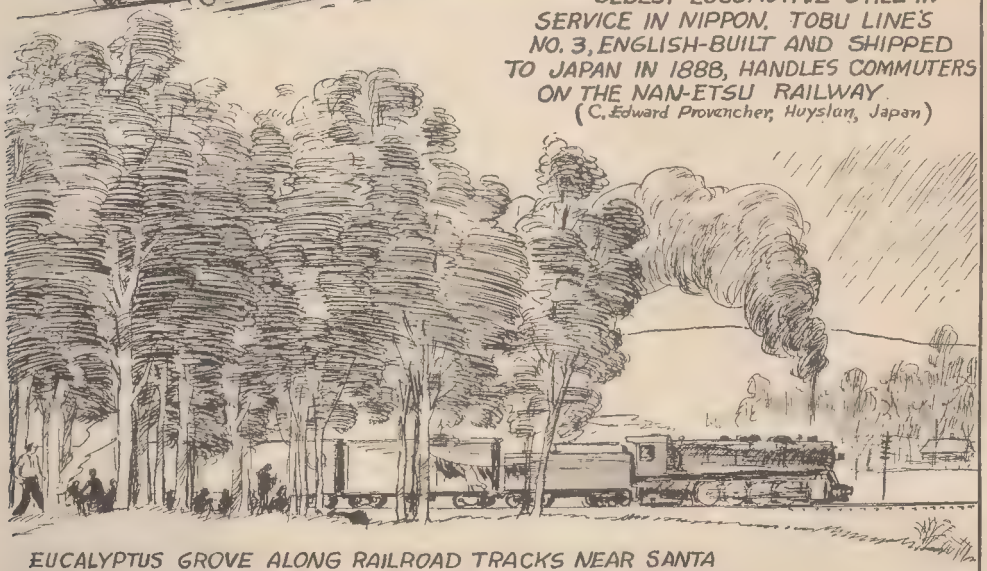
by JOE EASLEY

ST. LAWRENCE IS CENTRAL FIGURE OF STAINED GLASS WINDOW DEDICATED TO CANADIAN RAILWAY HEROES OF WORLD WAR TWO AT LONGMOOR, HAMPSHIRE, ENGLAND

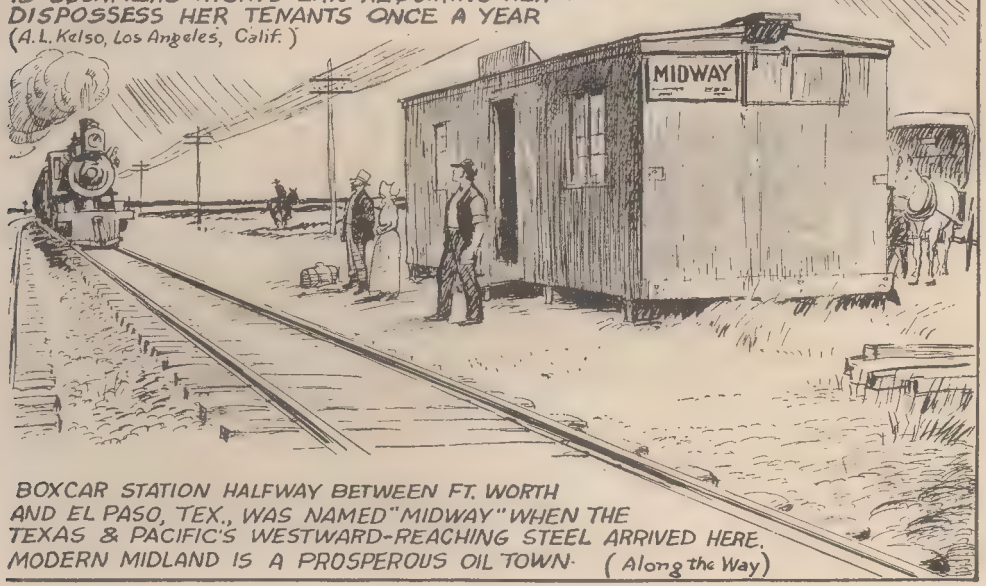


JOY AND GRIEF--KNOW THEM? SURE: THEY'RE ASSISTANTS ON SANTA FE RAILWAY DETECTOR CAR OPERATED BY L.V. HAEGERT, TOPEKA, KAN., WHO'S NEVER STUCK FOR A CHOICE (Along the Trail)

OLDEST LOCOMOTIVE STILL IN SERVICE IN NIPPON. TOBU LINE'S NO. 3, ENGLISH-BUILT AND SHIPPED TO JAPAN IN 1888, HANDLES COMMUTERS ON THE NAN-ETSU RAILWAY.
(C. Edward Provencher, Huyslan, Japan)



EUCALYPTUS GROVE ALONG RAILROAD TRACKS NEAR SANTA BARBARA, CALIF., HAS BEEN HOME FOR 60 HOBOES SINCE 1915. NO-DRINKING LAW LAID DOWN BY LANDOWNER, MRS. J. H. CHILDS, HAS BEEN SCRUPULOUSLY OBEYED; ALSO OBEYED BY MRS. CHILDS IS SQUATTERS' RIGHTS LAW REQUIRING HER TO DISPOSSESS HER TENANTS ONCE A YEAR
(A. L. Kelso, Los Angeles, Calif.)



BOXCAR STATION HALFWAY BETWEEN FT. WORTH AND EL PASO, TEX., WAS NAMED "MIDWAY" WHEN THE TEXAS & PACIFIC'S WESTWARD-REACHING STEEL ARRIVED HERE. MODERN MIDLAND IS A PROSPEROUS OIL TOWN. (Along the Way)

Sweden's Railways

EARLY in 1848, a tiny, two-axle, woodburning locomotive built by Munlsbell Works of Eskiltura chugged slowly over the new narrow-gage tracks at the Bergslagen ore mines in central Sweden.

Sweden had exported timber and minerals since Viking days; yet, due to the climate and the location of productive zones, her industrial system had remained uncentralized. With the advent of steam power, the State recognized the necessity of an efficient transport system linking the great forests—nine acres of timberland to every inhabitant—the 3000 sawmills along her rivers, and the mines with consumption and export centers.

Until the 1880s, rail development was confined to the southern and central districts. Then, just before the turn of the century, rich deposits of iron ore were discovered in the far north and Norrland and Lapland rapidly became the biggest ore producing area in the world. The vast lumber industry centered there had floated its logs down east-flowing rivers to sawmills on the Baltic; but for the transport of minerals steel tracks were necessary.

The first section of the northern route, from Luleå on the east coast to Gällivare in central Norrland, was opened in 1889. Fifteen years later, the 1000-mile line from Stockholm in the south to the mines at Kiruna near the northwest border was constructed under a 30-year trade agreement with an English company. Long before the contract ran out, the Swedish State was able to buy up the concession.

In 1890 Jonas Wenström solved the problem of the transmission of electrical energy. The cost of imported coal to run her railroads and factories had eaten up most of Sweden's rail and import profit. Now she was able to exploit her waterpower cheaply and rapidly. The earliest hydro-electric plant was located at Trollhätten in the district of the great lakes near the Bergslagen mines. The Alvkarleby plant on the east coast above Stockholm was built later, but it also serves the central-southern region, where there is the greatest concentration of raillines. In the north, Porjus became the main station; it supplies the Luleå-Riksgränsen route and sends an additional 132,000 volts southward along the Baltic coast.

In the same year that Wenström provided Sweden with electric energy, an American electric locomotive was successfully used at the Boxholm Iron Works. A year later, the first electric locomotive built in Sweden began operation on the narrow-gage trackage at the Wermbahl Sulphite Mills between old Göteborg on the west coast and Stockholm. But the first major railline electrification took place on the Luleå-Kiruna ore route between 1910 and 1915. The discovery of the Skellefete mines—among them is Boliden, the richest gold producing mine in Europe—in the interior below Luleå added more electrified mileage.

Much of the older trackage had already been converted. Between 1923 and 1926 the line from Göteborg into Stockholm was completely electrified and 12-car passenger trains began to whizz over the 388-mile run in six hours. By 1939, 80 percent of the traffic on 2370 miles of trackage was electrically operated.

When this figure is taken in relation to the fact that more than 50 percent of rail transport in the entire country is affected by hydraulic-electric power, it is apparent that only a few lines, most of them privately owned, still operate under steam power. Of these, the most important is the Bergslagen Railways, and it has a total of 151 miles of electric traction. During the shortage of the last war, its remaining coalburning locomotives had to be converted to wood.

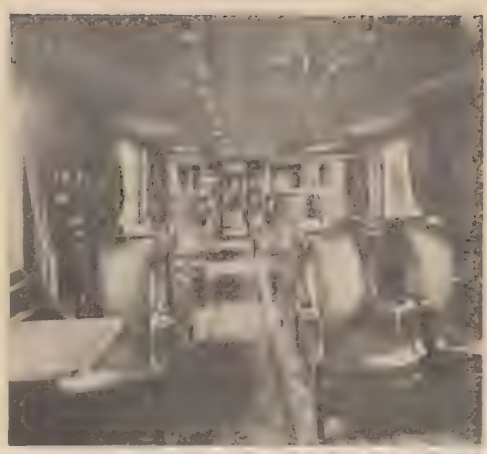
Photos and facts from C. W. Jernstrom

Power from south Sweden's chief hydro-electric station at Trollhätten whips this long ore train around a shelf cut from the Motalla River's lumber-producing banks

Rails swing into Norway across the southern flanks of Mt. Areskutan; but motorized buses, *at left*, save money in local passenger service here where the population rate is one inhabitant per square mile

M-type electric locomotive, *at right below*, nearing Hallsberg in central Sweden. The drag is Bergslagen ore from mines worked a thousand years and still producing the world's best raw material for iron and steel

Ingredient derived from cellulose rides under tarpaulins, ***at left***, from pulp mills of Norrland to cattle-feed factories in south. The story is that Swedish peasants on a bark diet defeated a Danish king, won their country's freedom; fact—according to Swedish Transportation Association—is that Swedes ate woodpulp mixed with scant grain during last two wars



Lack of coal once hampered Swedish industry. Now, using a cleaner form of energy, passenger cars always shine. Second-class ***salongsvagn, at right***, is typically well-kept and equipped

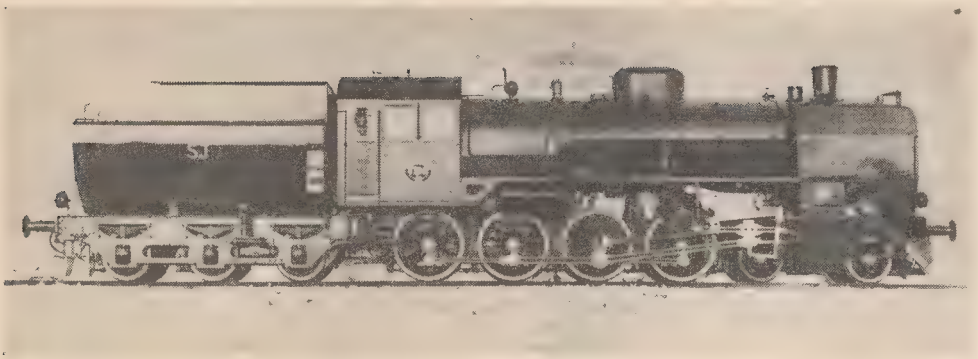
Left: Railway bridge from the mainland across Arsta Bay, Stockholm, dwarfs the capital city's skyscrapers—they're six stories high. Founded in the 13th century, Stockholm extends over numerous islands and bays. Central railway station, rebuilt in 1924, occupies one side of a square on Norrmalm, the northernmost of the city's five divisions

Right: White power, Sweden's substitute for coal, not only produces a freight revenue greater than that of any other country, but runs nearly all sawmills and mining machinery. Main power works are at Trollhätten in the Bergslagen area, at Arvkarleby, and at Porjus in Lappland

Falun railway station, in Dalecarlia. The ***Stora Kopparberget***, dating from the 13th century and the oldest industrial company still in existence, was founded to mine Falun's copper. The wars of Gustavus Adolphus in the 17th century exhausted the copper veins; but since the Middle Ages Falun's iron mines have continued to produce richly

Gleaming station at Falkoping is also part of the Bergslagen mining area, but receives many tourists and holiday visitors. Falkoping is midway between the giant lakes, Vanern and Vättern. Use of motor buses for passenger traffic here leaves the rails free for heavy hauls of feldspar, quartz and mica

Standard third-class day coach, ***below***, has upholstered chairs for 86 persons inside its welded all-steel body. Forced ventilation takes the place of air conditioning



Nordquist & Holm of Trollhätten stands for long-term quality in Swedish locomotive building. No. 1739, *above*, is one of ten Class E10s outshopped in 1946, the latest-built steam locomotive now in use

Consolidation at Trollhätten in 1930. Steam turbine presented interesting possibility to coal-poor Sweden; but fuller electrification has displaced these 2-8-0s on all but roads in extreme south near the country's few coal deposits

Class R freight locomotives, along with Class A and B passenger engines, are the largest in use on the State Railway lines. No. 976 carried six tons of imported coal and 5000 gallons of water; has been out of service since electrification of the Riksgränsbanan, or "Ore Line"

Sleeping car operated by Wagon-Lits, the European Pullman Company. Since German Alps became unpopular, international service between Stockholm and Basle, Switzerland, via rail ferry to Denmark, has been increased by addition of a ferry to Warsaw, Poland, on the Czech borders. Report is that Swedish Red Cross, famous for refugee work in 1920s, now makes extensive use of the latter route

Scant population in northern Sweden justifies the use of railbuses with gasoline or Diesel motors on shortlines. Over 300 operate on the State Railways. This one, between Björkliden and Låktatjakko in upper Norrland, carries double its passenger capacity in skis

At Abiska, 30 miles from Kiruna, and near Riksgränen, frontier terminus on the Norwegian border. Ore train below moves under power transmitted between Narvik, Norway, and the Baltic port of Luleå. Machine room at Porjus is 165 feet beneath frozen ground

The skipper and I raced from car to car, frantically tying down brakes

By WILLIAM F. KNAPKE

THE LUMBERMEN have their Paul Bunyan, the trackmen their Jawn Henry and the trainmen their—Haywire Mac. But while Paul Bunyan is entirely fictional, Jawn Henry mostly legendary, Haywire Mac is wholly factual and at this date is still adding to railroad history. There have been many oldtime railroad boomers whose feats of action and speech have been, and are, told and re-told wherever railroaders fraternize, in switch shanty or on footboard. Yet of all of these heroes, past and present, none can match the many and varied achievements of Haywire Mac, song composer, singer, writer, painter and railroader.

Born on October 8, 1882 at Knoxville, Tenn., Harry Kirby McClintock arrived in this life with pretty much of a predestined career before him. With his father a railroad cabinet maker, one uncle also a shopman and four other uncles boomer trainmen, it would have been almost impossible for him to escape being bitten by the "railroad bug." Yet as every old boomer did, Mac passed up a job in his home city to start his railroad career in—of all places—Africa. After a short stay in the Dark Continent, he tried his

Each In His Time

hand at sailoring, staying on the decks almost long enough to class himself as a seaman.

Returning to the U. S., Haywire Mac began the boomer life that has made his name famous from coast to coast. To name all the railroads he has drawn pay checks from would sound like reading the *Official Railway Guide,* yet in between his many train-service and yard jobs Mac found time to dally in other fields of employment, such as making a few trips on a Great Lakes freighter, herding sheep in Nevada, punching cattle in Montana and on any and all occasions plunking his old "git-fiddle". Mac learned to play a guitar in his youth and having a good singing voice, incidentally he still has, it didn't take him long to learn that these were good almost anywhere for his "eats and sleeps".

Here and there along the trail Mac composed many songs, some now famous as folk songs. You've probably heard at least one or two of them since, they have been recorded by the Victor Phonograph people and have been sung over the air by countless radio singers. Probably the best known of his long list are *The Big Rock Candy Mountains* and *Hallelujah,*

I'm a Bum. Mac played and sang both of these on two radio broadcasts of a famous railroad program during November and December, 1946. And radio programs were nothing new to Mac. From 1920 until several years later, he had his own program on Station KFRC in San Francisco, and while broadcasting there he was given the distinction of performing on the first regular program broadcast from an airplane. This stunt was under Army auspices, employing a Martin bomber on June 4, 1926, which flew over San Francisco's Crissey Field.

Mac is justly proud of the thousands of letters he has received from listeners and they're carefully preserved in scrap books. I believe, though, that he is just a little prouder of his "homeless mutt" club than of anything else. Mac and another chap conceived the idea of rescuing mutts from the dog pound and finding homes for them, and the response to Mac's appeal was overwhelming. As Mac says, "It was double-barreled. One dog and one boy, both made happy." Repeated a thousandfold—that made a lotta happiness.

Letters from bedridden sufferers, whose only means of entertainment came over the ether, were received with deep appreciation by Mac. "If the gang and I can bring any happiness or brightness to shut-ins and sick folk—well, we sure are glad of it. We only regret we can't do more."

That's a mighty nice thing, to be able to think back to the happiness and entertainment one has given to his fellowman. But I could go on for endless pages covering Mac's radio career: of the famous artists he has appeared with, of the noted hotels and resorts from which he has broadcast; still repetition grows monotonous. And after all we are interested most in his railroad career.

Early in life Mac was initiated into railroading by one and another of his boomer trainmen uncles. As soon as he could toddle—well a little later—they taught him railroad sign language with lantern and hand. "There was a long boardwalk in our back yard," Mac says, "and I spent many a summer evening galloping up and down that walk giving signals to an imaginary engineer." And while Mac doesn't say so, I expect he was also addressing various sultry remarks to said imaginary pig jockey as was the habit of boomer trainmen then, now and ever shall be. Having had four railroader uncles of my own, I can make a pretty fair guess that they taught Mac more than signals.

Be that as it may, Mac hit the Pennsylvania Railroad for a job and went to work in the Wall yard just east of Pittsburgh. But not for long! They introduced him to a "stake engine", a method of shunting by swinging a stake or push-pole from one corner of a car ahead of said engine, so that it pushed a car or cars on an adjoining track, then "batting the begeezus" outta the cars that were pushees to shoot them into clear on a designated track. The theory was fine but too many times the execution was direful. Too hard a ram against the cut and the stake would double up in an endeavor to tie a necktie around the stakeman's neck. Four nights and four victims were four too many for Mac. He pulled the pin.

Drifting on to the Panhandle yards at Sheridan, Pa., he was just in time to see a car inspector's lamp touch off a car of gasoline. The resulting blast and conflagration destroyed nearly all the freight cars in the yard and about half the town before it was brought under control. Right after that, a car of high explosives let go in the Crestline yards, blowing a trench outta the ground clear across 11 tracks, destroying 155 cars and fixing several hundred more so they had to be shopped for repairs. All in all, Mac decided, the effete East was becoming too strenuous.

Mac chose a nice spot then—the Duluth, Missabe & Northern—riding ore drags from Proctor to the Missabe docks. It was one of those jobs where if a train ever got away a trainman had a soft spot to land in, the cool water of Lake Superior. Said trainman would land in the big pond with several thousand tons of ore on top of him, but that didn't alter the

fact that the water was cool. The job was seasonal, however, for as soon as cold weather came the ships stopped operating and the railroad shut down. Mac held the job so long he could afford a sojourn in a sunny clime. Sailing down the Father of Waters aboard the steamer *Golden Eagle,* he debarked at Biloxi, Miss.

FATTENED on fish, wild ducks and oysters, Mac again took off for the high places. He landed in Salida, Colo., where he worked for the Denver & Rio Grande over Tennessee Pass. Then on he went to the Union Pacific . . . and a runaway train on the famous Sherman Hill. I'll let Mac tell you that story, just as he told it to me.

"At the top of the hump we stopped to make the routine brake test and turned up all the retainers. Pulling out, Conductor Douglas and I caught the crummy and took our accustomed places, the skipper on the seat opposite the stove with his head outta the side window, myself in the cupola where I could keep an eye on the air gage and watch the opposite side of the train. Shortly afterwards, the engineer made what I judged to be about a 10-pound brake application, following it immediately by a second one. The slack in the train ran down against the head end with a jolt. I leaned out the window to get a good look at the train as we rounded a curve. When I pulled my head back in and took a squint at the air gage, the needle was pointing at zero.

"I simply fell out of the cupola, grabbing for my mittens and brake club. 'That hogger's lost his air!' I bellowed, making for the front door. The conductor was a little guy but plenty speedy; as I swarmed up the ladder, he was right at my heels. I reached for the first hand brake and the skipper raced ahead.

"Just then the hogger gave one blast of the tooter. He must have looked back, seen us, and got busy at his own job, for that was all we heard from the whistle. Douglas and I were in our shirt sleeves, with no cumbersome clothing to hamper our movements, so we set brakes about as fast as two men could. There was a short level spot about two miles down the grade, a regular inspection point. If we could only get 'em stopped on that little flat, we were okay. If he didn't—well, it was a cinch we'd either wind up in the ditch or roll right on into Cheyenne.

"I was swinging every ounce of meat in my carcass on that brake club as we raced from car to car. I could see both the hogger and the tallowpot out on the engine's running board, frantically trying to get the air pump going. I was wondering why the head brakeman wasn't out on top giving us a hand, but it wasn't until the skipper and I were nearly at the head end that we found out. The headman, wearing a cap pulled down over his ears plus a heavy sheepskin collar turned up, had chosen to ride the only low car in the train—a gondola loaded with machinery, where he was somewhat sheltered from the wind. With his ears muffled he failed to hear the one lonesome toot the hogger gave his whistle. He was totally unaware that we were running away until the conductor and I had worked our way over to the car he was riding.

"We got 'em stopped on the flat. Only then did I suddenly realized that I was in my shirt sleeves, with the thermometer standing at about 20 below and a Wyoming zephyr blowing through my clothes

as though they were made of mosquito netting. Br-r-r!"

The foregoing is a simple little tale from the life of a boomer brakeman but perhaps it will give you an idea of why they were content to wander up and down the iron highways of the country. The eternal search for new experiences and thrills, the feet that were ever seeking to discover what lay on the other side of the hill.

From the Union Pacific, Mac wandered up into the State of Washington and tried his hand on a logging road working with a Shay locomotive. As it takes one of those geared-down 'gines from now on to go from here to there, Mac didn't stick very long. Of course the Northwest rainy season didn't have anything to do with it—or did it? Anyway a chap named Jack Evans, who owned a small snug sloop anchored near Seattle, made Mac a welcome visitor and the two put in the balance of the wet weather in comfort.

In the spring Mac took the first steamer to Alaska, where he depended on his musical talent, rather than his knowledge of shunting the rattlers, for his eats. Next he made the longest jump of his career, Alaska to Tucson, Ariz., and a sojourn with the Southern Pacific. It was a short hop then to Pueblo, Colo., and the Denver & Rio Grande under Yardmaster Joe Elliott. He camped quite awhile in Pueblo, 'til the World's Fair opened in St. Louis.

With the native curiosity of every boomer, Mac couldn't miss that celebration so he pulled the pin on the Grande and went on to the Fair and to the Terminal Railway at St. Louis.

Itching feet took him into the Sunny South, next, to Memphis, Tenn. Tarrying there, he had his first experience with Negro switchmen as his helpers, taking his instructions. This job gave Mac a good many laughs, as well as a sincere liking for the men he bossed. "They were loyal," Mac says, "almost to a fault—if they liked a foreman and respected his ability as a railroader. And if they didn't like a man those African gentlemen were capable of getting a guy into the dad-blamedest jams of his career, with an appearance of utmost innocence."

Having heard of no recent gasoline fires or dynamite explosions in Pennsylvania, Mac decided about that time to see if his luck was still good. Accordingly he proceeded to the Pennsy Conway yard, just in time to land smack-dab in the center of the famous Pittsburgh Blockade, probably the worst blockade in the annals of American railroading. During that great tie-up, trains were frequently on overtime before they departed from their initial terminal which meant nine hours from the time they were supposed to leave. Mac worked many nights on the Big Pimple or westbound Number 1 switching hump. Due perhaps to the number of inexperienced switchmen used, this was one of the most dangerous yard jobs in the country.

Again the urge to seek pastures new and fields that were greener caused Harry to trek back to the Golden West. When the great earthquake and fire occurred in San Francisco, he was working for the Southern Pacific. Later on he found the confines of the U. S. too small, so Mac decided to cross the border into Canada and give both the Canadian Northern and the Canadian Pacific the benefit of his services. Finally he returned to the States and wandered about some more until the railroad strike of 1920 halted his railroading temporarily.

In the beginning of this article I mentioned Mac's ability as a painter. Now I don't make any pretense whatever to being an art critic or knowing anything about the fine points of painting, but I do know doggone well when a picture pleases my eye, when it truly presents a scene. I saw one of his paintings that showed a sheepherder's wagon in the foreground, a flock of sheep immediately beyond and in the background a range of hills, purplish in the evening shadows and the light of the setting sun beyond. I saw in that picture just what I've seen many times in reality and, believe you me, it was true to the last dab of color.

I talked a long while with Mac and I

made many notes, endeavoring to reconstruct from them a readable account of a few of his tours and activities—the highlights of a long and spectacular career. During our conversation I asked Mac why he had adopted the wandering life instead of remaining in a fixed locality. His reply epitomized the philosophy of the oldtime boomer.

"I, and thousands like me, drifted and wandered from job to job all our working lives, following no plan and making no pattern, yet some few of us profited from those years that you might ordinarily call wasted so far as the rest of us were concerned. Jack London was one of our tribe. I've hooked elbows with that famous story writer at Johnny Heinhold's *First and Last Chance* saloon on the banks of the Oakland Estuary here on the West Coast, and I've been a guest in his home. I've met Walter P. Chrysler and traded boomer reminiscences with him.

"Chrysler was once a wandering nut-splitter, learning his trade in a roundhouse. He wanted to know how things were done in other shops, so he became a boomer and slept in sandhouses and boxcars when he lacked the price of a bed, and battered back doors when he was hungry. No, I've never regretted spending my time wandering. For I've seen life and I've lived it."

When World War II came along Mac again hit the footboard of an engine at San Pedro, Calif. Now he's writing a book on railroading and he is still employed.

John A. Krug, White Plains, N. Y.

Mexican Central took the low road when crossing Queretaro Aqueduct, structure built by the Spaniards in 1738 to carry drinking water to the city from mountains 5 miles off. Travel-book photograph is dated by more than the *American*-type engine in the foreground: 1907 changed the *MC* lettering to *National Railways of Mexico*

Light of the Lantern

Wheel Sliding

FLAT spots on wheels are an occasional source of annoyance to passengers, but to railroad men, whether train crew, track workers, shopmen, or officials, they are a headache of the first order. For the hammer-blow action which they produce is not only damaging to the car trucks and rail structure but can, in the case of a driving wheel, cause a derailment at high speed.

Except in those rare cases involving defective steel, most flat spots result from wheel sliding. This, in turn, is brought about by improper handling of the brake valve or faulty braking apparatus.

From the very inception of the airbrake, the subject of sliding wheels has been carefully considered. In pioneering days the problem of bringing a train to a quick, safe stop was the prime concern of brake designers. But as high speed entered the picture other factors had to be taken into account. Merely forcing the brakeshoes firmly against spinning wheels was not enough; actually it was found that too great a force at the wheel rim was detrimental to retardation. Motorists know that the locking of automobile wheels on an icy road results in loss of control and the same condition applies to a railroad car wheel.

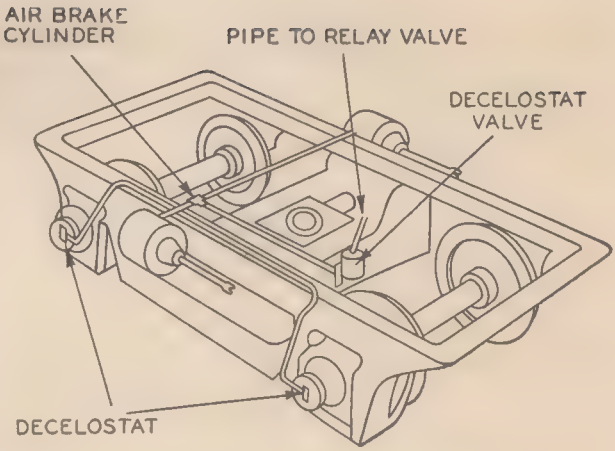
As early as 1878, the Westinghouse-Galton tests in England proved that the faster a wheel revolved against a brakeshoe the less friction was produced. The explanation is not hard to find. Bear in mind that for all their apparent smoothness both the wheel and shoe surfaces are covered with microscopic barbs. At high speeds the irregularities pass over each other so quickly that they have little chance to interlock. The effect is like that of rubbing two files together rapidly.

Motion is produced with ease. Reduce the speed of the files, however—or that of the wheel against the brakeshoe—and movement becomes increasingly difficult.

As for adhesion at the rail, given smooth, dry track, it was found to remain almost constant regardless of variations in wheel speed. The degree of retarding force necessary to produce wheel sliding depended upon the weight of the car and was roughly 25 percent of that weight. With these facts established it was a simple matter to determine the size of a brake cylinder and the amount of leverage needed to decelerate a train of a given weight at any *one* given speed. But the bugaboo of varying brakeshoe grips at different speeds called for some sort of compensating change of pressure.

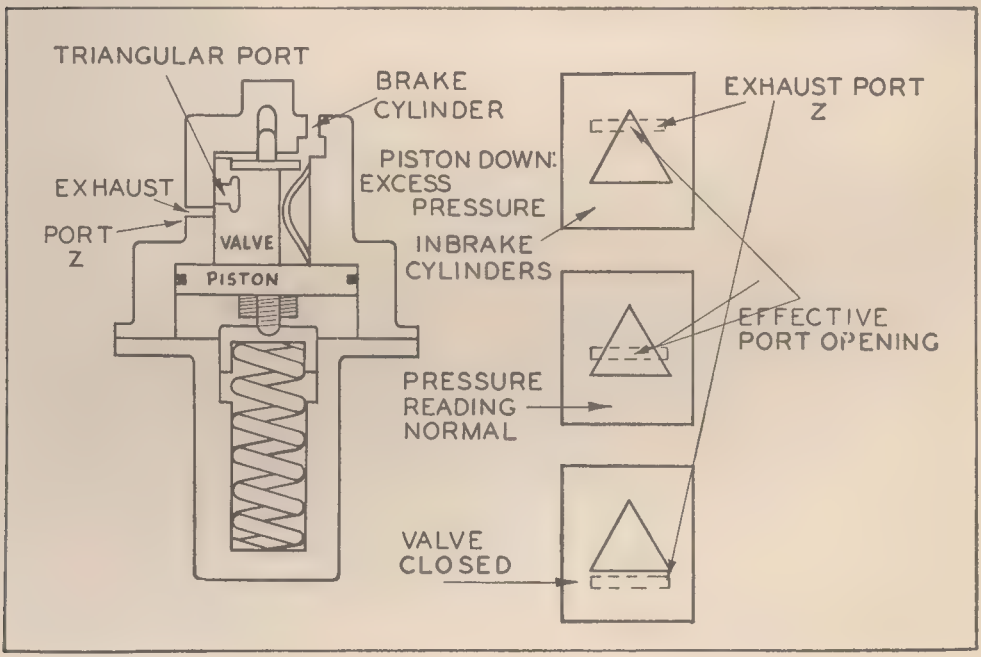
Thus was born what was known as the "highspeed brake," which provided high cylinder pressures when the friction was low and reduced them automatically when it became too great. It prevented sliding wheels and at the same time stopped trains in two-thirds the distance required for the quick-action brake.

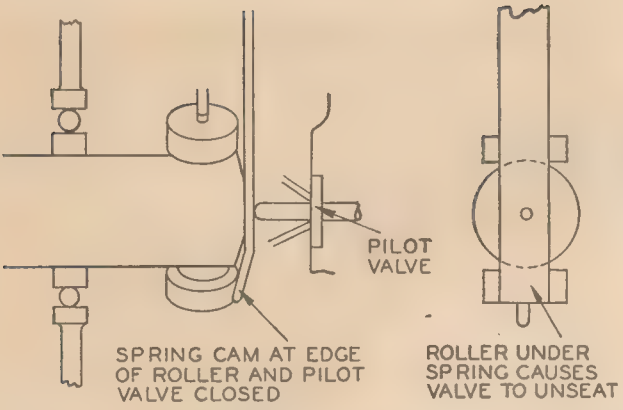
The principle of operation is very simple. It involves the use of an automatic



Above: **Arrangement of Decelostat elements on passenger car truck**

Below: **Triangular-shaped port is key feature of reducing valve, which automatically determines degree of pressure applied by brakeshoes at varying stages of deceleration**





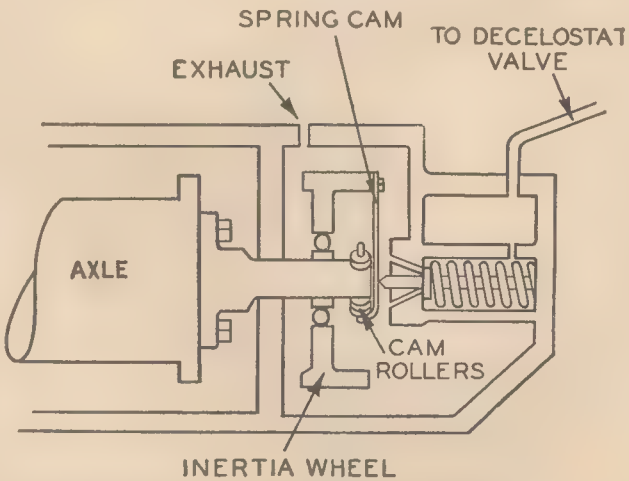
Spring cam of Decelostat rides up on rollers when wheel speed drops below that of inertia wheel

reducing valve, consisting mainly of a piston, a slide valve and a spring. The area around the valve and on the upper surface of the piston is filled with brake cylinder air when the brakes are applied. The piston is then forced downward against the spring, especially during an emergency application, and the slide valve follows. The port in the slide valve is triangular in shape and so arranged that when it is in its lowest position (during heavy applications at high speeds) only a tiny opening is provided at the exhaust port. But as the pressure reduces in the brake cylinder and on the top of the piston, the compressed spring forces the piston and valve upward, increasing the effective area of the opening. At the same time the speed of the train is diminishing and the air is being vented more rapidly from the cylinder. At the end of its travel the valve is at *closed* position, with the remaining pressure trapped in the cylinder. The speed has not been reduced and only normal braking pressure is obtained.

THIS highspeed brake has served its purpose well but with the advent of the streamlined train and ever more exacting schedules came the demand to raise the initial braking force from 90 percent to 250 percent of the weight of the car. We have seen that while this is permissible at high speeds it is damaging in the lower ranges. Also we know that when the rail is slick, 25 percent adhesion may be reduced to 10 percent. This posed another problem.

Numerous attempts were made to produce a reducing valve which functioned in direct response to train speed. While reasonably successful, none of them reacted to varying rail conditions until Westinghouse engineers developed a mechanical and pneumatic device called the *Decelostat.* Research had shown that wheels do not go into a slide instantly and it was upon this characteristic that the functioning of the Decelostat has been based. The equipment consists of a Decelostat valve, generally attached to the bolster of the car truck with one Decelostat for each pair of wheels. The valve needs little explaining as it makes use of the pistons, valves and springs common to all airbrake reducing valve systems.

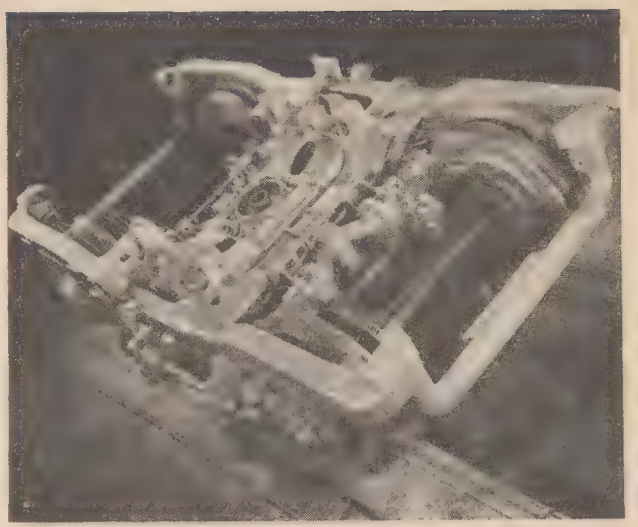
The heart of the system is located on



When spring cam is thrust outward it unseats pilot valve, draining air from brake cylinders and easing pressure on wheels

the axles at the journal boxes. Attached to each axle is a shaft at the end of which is a cam roller arm. As the wheel turns the roller arm revolves. Inside it, supported by the axle but riding free on roller bearings, is an inertia wheel. Upon this wheel, and so placed that it contacts the axle end, is a flat spring with a curved end.

When the train starts and the wheels gradually pick up speed the inertia wheel is driven by the contact of the spring upon the axle end. As will be noted in our third drawing the spring also contacts a pilot valve which in normal position is seated, or closed.



More effective braking agent than the shoe is the disc-brake, whose band-clasped drums are edged with cooling fins

While the train is moving there is no air in this system but as soon as pressure is reduced by a service or emergency application of the break valve, air flows from the relay valve to the Decelostat valve. Here it passes through ports to the brake cylinders and starts the application. At the same time, this brake cylinder air is also traveling through piping to the seat of the pilot valve.

Now if the train is retarded in the usual manner, and the car wheels do not lock or slide due to excessive pressure or slippery rail, nothing happens at the axle, the inertia wheel continuing to revolve at the same speed as the car wheels.

But if for some reason the retardation of the car wheel is below normal, with a tendency toward losing its grip, the inertia wheel gets ahead of it, forcing the end of the spring over the rollers and unseating the pilot valve. This vents the air in the pipe from the valve and sets it to work draining the air from the brake cylinders. Immediately the friction between the brakeshoe and the wheel is reduced, allowing the car wheel to revolve at its normal rate. This synchronizes the movement of the inertia wheel and the axle, again seating the pilot valve and allowing brake cylinder pressure to build up again. If the wheel then slows down at a normal rate there will be no further action on the part of the Decelostat. But should it occur, the protecting action of the inertia wheel, spring and pilot valve will be faithfully repeated.

INFORMATION BOOTH

1

WHAT *were the results of the wheel balance tests conducted at Coatesville on the Pennsylvania Railroad last August and September?*

At the increased speed of modern service railroad passenger riding comfort is dependent to a large extent on the degree of perfection in balance of the rolling wheel. This broad conclusion was reached in a month of tests conducted by the AAR with equipment and personnel supplied by Budd Company, and with the co-operation of the Pennsy. Used under almost ideal track conditions, in the road tests, the wheel ground to within five-thousandths of an inch of perfect concentricity produced an almost perfect ride; while another wheel, purposely thrown out of

Courtesy C&O

Footing feat. Over 1300 concrete pilings have been cast to support $5,000,000 coal pier being erected by the Chesapeake & Ohio at Newport News, Va.

balance, showed the usual bounce, or vertical thrust, and sway, or lateral thrust, which plague riders in the cars mounted on moving trucks. The effect of such changes is most evident at speeds above 50 mph. A difference of 5 pounds in concentration of weight in a wheel weighing a total of 900 pounds, is equal to a pull of one ton in the wrong direction at a speed of 100 mph., according to the engineers. The studies also covered the effect of varying widths of track, measured in fractions of inches, on riding comfort of the train. Every motion in the truck itself as well as within the car was accurately measured. Visual as well as instrumental proof of the effects of the balanced wheel was afforded by camera recording and by glass floors and an observation pit at wheel level.

2

PLEASE *list the names of all dining cars now in use on the Florida East Coast Railway.*

The Flagler System owns the following dining-car equipment:

Stainless Steel Type

Fort Lauderdale
Fort Matanzas
Fort Pierce
Fort San Marco
Fort Dallas

In addition to diners listed above, Florida East Coast provides handsome tavern-lounge cars like the stainless steel *Lake Okeechobee*

Standard Type	Breakers
St. Augustine	Miami
Royal Palm	Palm Beach
Royal Poinciana	Daytona Beach
Casa Matina	Key West

3

WHEN *was the first television broadcast on a train?*

The Baltimore & Ohio Railroad and Bendix Radio joined in the first practical demonstration of television reception on a railroad train last October 7th, to bring in the second game of the World's Series in Boston between the Braves and the Cleveland Indians, from stations in Washington, Baltimore, Philadelphia and New York. The test was conducted on a car attached to the *Marylander,* which left Washington at 1:30 p.m., traveling at approximately 80 miles an hour. The receiving equipment, consisting of a special antenna for highspeed reception, was developed by Bendix engineers. In 1947 the B&O put in radio-telephone facilities for passengers on the *Royal Blue* between Washington and New York.

4

IS IT *true that the Pennsylvania Railroad will tear down the old depot in Burlington, New Jersey, and erect a new station in its place? Please furnish particulars.*

Plans for the new passenger station at Burlington have been completed, and it is expected that the new facilities will be in operation early this winter. The new structure will be located on the north side of the track, between Ellis Street and State Highway S-25, about 2000 feet west of the present building, which will be removed. The new station and its platforms will be entirely on railroad property and, since the right-of-way at this new location is 100 feet wide, there will also be ample space for a convenient parking area adjacent. To permit the proposed

Sliding home at 80 miles per hour. B&O gave travelers their first train television show last Oct. 7th, snatching fragments of the World Series out of turbulent air above ***The Marylander.*** Gent in foreground bet on Boston

widening of Broad Street, which the railroad follows through town, the Pennsy will eliminate one of the two tracks now running between Locust Avenue and a point west of the State Highway, and will also remove the former team-track siding at Ellis Street.

The City of Burlington, as its part of the improvement project, will completely repave Broad Street for a distance of about 4000 feet on both sides of the railroad's right-of-way between the Assiscunk Creek bridge and the new station. This building, 40 feet in length and 16 feet wide, will be of the most modern type, costing upwards of $40,000. The use of large areas of glass and an integrated, overhanging shelter roof, will give it a close resemblance to the new commuters' station of the Long Island at Cold Spring Harbor. It will contain a cheerful and well-ventilated waiting room, with two sides almost completely formed by windows; an efficient office for the ticket agent, with a so-called "banking house" type of open counter topped by a low glass partition; a utility room for the heating plant; and modern sanitary facilities.

The entire building will have radiant heating set into its concrete floors, and the waiting room will be equipped with an electric water cooler, telephone booth, and comfortable benches. Lights will be recessed in the ceilings. Inside, as well as out, the walls will be of light-gray tapestry brick, with light colored trim. The foundation will be of concrete and the rafters of timber, while the roof itself will be covered with asphalt tile.

Incidentally, the Camden & Amboy Railroad, which forms the oldest component part of the Pennsylvania, obtained its

Polish *Decapod*. National Railroad Car Factory is turning out these cabbage cutters to keep traffic rolling (eastward?) on the Polish Railroad Lines. Circular connection between tender and all-weather cab would seem to have merit, providing uninterrupted supply of coal should the hog roll over on her side

British Combine Photo

Charles' A. Elston, Downingtown, Pa.

Diesels on the Catawissa Branch. Four-unit Alco freighter clumps through Williamsport, Pa., bearing the Reading diamond on her blunt snout. She has just left Newberry Yards, enroute to Tamaqua and Philadelphia

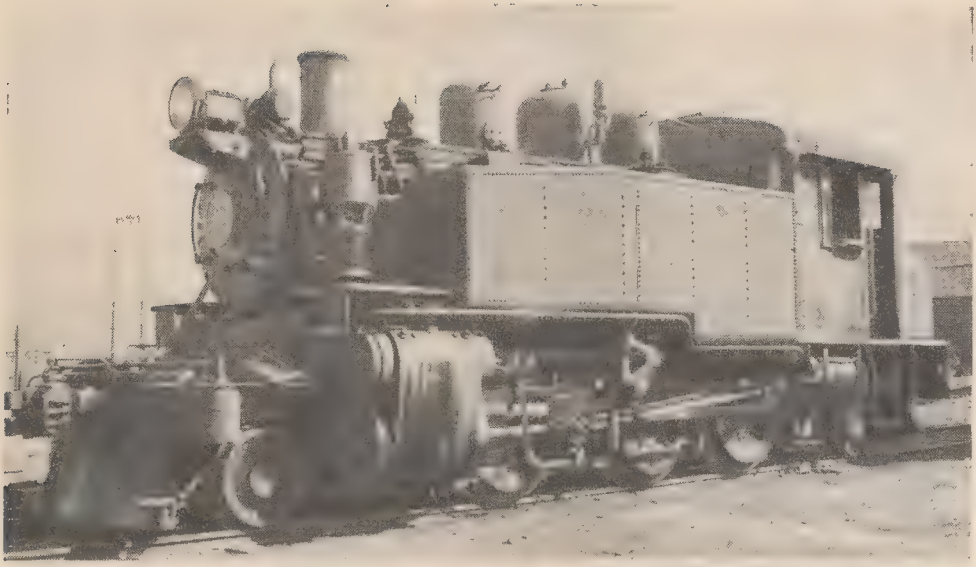
right-of-way through Broad Street, Burlington, by agreement with the city on April 19, 1831. The site for the present station, regarded as one of the most picturesque depots of its period remaining in New Jersey, was procured on March 14, 1868.

5

WHAT *was an average boiler pressure in the year 1840, 1855, and 1870?*

Boiler pressures on locomotives in the United States in 1840 generally ranged between 80 and 100 pounds. However, the Baldwin-built 4-2-0-type locomotive *Neversink,* of the Philadelphia & Reading, made a 40-mile run from Reading to Bridgeport on March 12, 1839, hauling 45 cars, weighing 223 tons, at an average speed of 12¾ miles per hour, with the steam pressure varying between 80 and 120 pounds, according to G. A. Nicolls, superintendent of the railroad. On February 20, 1840, the Eastwick & Harrison-built 4-4-0 *Gowan & Marx* hauled a train of 104 loaded 4-wheel cars, weighing 423 tons, from Reading to Philadelphia, at an average speed of nearly 10 miles an hour. Including the weight of the locomotive and tender, the weight of the train equalled 40 times that of the locomotive. The line was level or slightly descending, with only one opposing grade, 2100 feet long, rising at the rate of 26.4 feet to the mile. The locomotive was stated to have consumed 5600 pounds of red ash anthracite, while evaporating 2774 pounds of water. This represented an actual evaporation of 4.13 pounds of water per pound of fuel. Mr. Nicolls gave the weight of the locomotives as 24,660 pounds, with 18,260 on drivers, and stated that "the steam ranged from 80 pounds to 130 pounds per square inch, to which latter pressure the safety valve was screwed down."

The Illinois Central's first locomotive, a 4-4-0 built in 1853, carried 140 pounds' boiler pressure, while the Delaware & Hudson's *Farewell,* constructed the same year, operated at a pressure of 100 pounds. Illinois Central Number 83, built in 1856, carried 140 pounds' boiler pressure. All of these engines were *American* type, built by Rogers, Ketchum & Grosvenor. Dickson *Mogul* locomotives *Albany,* built in 1870, and Number 222, constructed the following year, for the Delaware & Hudson, both operated at 120 pounds' pressure, typical for D&H engines then.



Robert M. Hanft, Brainerd, Minn.

Custom-built by Alco for the Quincy Railroad, this 2-6-2 tanker operates over one of the four shortest railroads in the United States performing freight, passenger, express and mail service

6

GIVE *a brief account of the Quincy Railroad Company of California.*

The Quincy Railroad was incorporated November 9, 1917, purchasing the entire assets, rights and privileges of Quincy Western Railway Company. Track runs from Quincy to Quincy Junction, Calif., 5.29 miles, with .96 mile of sidings. Rail is 52 pounds, laid to standard gage. Equipment consists of two locomotives, one flatcar, and one combination passenger coach. The Quincy is one of the four shortest railroads in the United States performing freight, passenger, express and mail service. The 3-mile Beaufort & Morehead Railroad in North Carolina is the shortest.

7

HOW *many railroad crossings and turnouts are there in the United States and Canada?*

There are about 22,000 crossings and 239,000 turnouts in use on the railroads of the United States and Canada. With four individual frogs to each crossing there are approximately 327,000 individual frogs. At least 100,000 of these frogs are made of manganese steel.

8

FURNISH *data on the Missouri Pacific's new airbrake instruction car.*

Originally an all-steel Pullman parlor car, the new airbrake instruction car was completely rebuilt and outfitted at Sedalia Shops. It contains working, full-size brake equipment such as is used on locomotives and passenger and freight cars, including the latest type electric brakes installed on Diesel passenger engines. Air conditioned and with comfortable chairs for 48 (although 60 can be accommodated), the car serves a dual purpose of permitting study groups to assemble at designated points and also allowing running tests to be made. The car's interior is divided between an instrument room, the large instruction room, and two staterooms for the traveling in-

structors, or inspectors. The staterooms are inter-connecting, have a shower, and each contains a permanent bed.

The demonstrating brake equipment in the instruction room has been so installed that all of it is more or less against the side walls of the car but the tell-tale gages that register operation of the mechanism have been mounted on brackets which can be swung out across the center aisle of the car so that all in the room may see. Class sessions in the car are usually about one and one-half hours long. Oral instruction is aided by a public address system, the lecturer wearing a microphone to permit freedom of movement around the equipment. Visual aids are movies, manufacturer's charts, graphs, and other explanatory literature. The car stays at one location from a few days to two weeks, so that different groups of employes may receive instruction.

The instrument room is equipped with

Tech on wheels is this Missouri Pacific airbrake instruction car. *At right:* AB-1-B, UC and K equipment installed to trace functioning and demonstrate operating techniques. *Below:* Down-car view of instructor's station. Hey, Prof., how do you raise this Venetian blind?

Courtesy Missouri Pacific

intricate devices which permit exceedingly accurate recording of data relating to the actual operation of the train in which the car is moving from place to place. A cast steel pedestal supports a heavy table on which are mounted three Esterline Angus recording instruments, one of which measures the speed of the moving car. The second computes brake pipe pressure in the brake pipe under the car, and the third records brake cylinder pressure under the car, or brake cylinder pressure on the locomotive when the car is placed next to the engine in a train. Other instruments include two impact recorders, one for passenger, and the other for freight trains. These units automatically record train handling, indicating jolts and jars on a time-calibrated tape.

The use of an airbrake instruction car on the Missouri Pacific dates back to 1926, but this new car embodies many improvements over its predecessors.

Each month the Lantern Department prints answers to rail questions of general interest, submitted by our readers. We do not send replies by mail

Railroads thought nothing of hauling this 12½x24-foot generator armature from GE's Schenectady, N. Y., plant to San Francisco, but it took a specially built truck with 74 rubber-tired wheels to get it across town to a power plant

Doyle B. Inman, Whitley City, Ky.

One hundred percent Dieselization is goal of the Monon. Hoosier Line's 82 and 81 invade city streets at KIT Crossing

Locomotives of the Monon

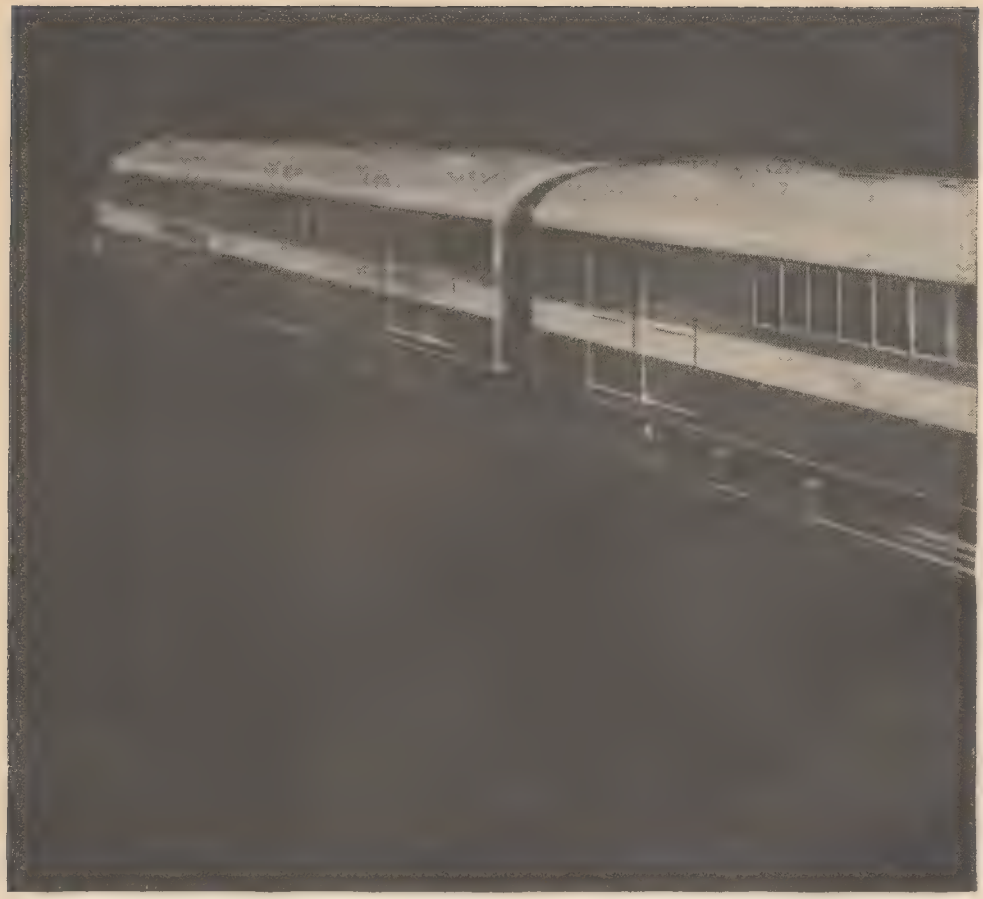
Steam Locomotives

Class	Numbers	Cylinders	Drivers	Pressure	Engine Weight	Tractive Effort	Builder and Date
		0-6-0 (Switcher) Type					
B-8	95	20 x 26	51	200	142,000	34,670	Brooks, 1907
		2-8-2 (Mikado) Type					
J-1	514, 525	28 x 30	63	185	286,000	58,700	Brooks, 1912-18
J-2	550, 554	26 x 30	63	200	292,000	54,700	Schenectady, 1918
J-4	571, 572, 576, 578, 579	27 x 32	63	220	345,500	80,740*	Schenectady, 1929
J-3	560, 564, 565	27 x 32	63	200	317,000	63,000	Richmond, 1926
		4-8-0 (12-Wheeler) Type					
E-1A	229	21 x 26	55	200	192,000	35,450	CI&L, 1923
E-1B	231	21 x 26	55	200	196,000	35,450	CI&L, 1924

Diesel Locomotives

Numbers	Drivers	Horsepower	Engine Weight	Tractive Effort	Builder and Date
		B+B (Switcher) Type			
11-17	40	1000	246,000	61,500†	EMD, 1942, 47
18	40	1000	243,600	72,000‡	Fairbanks-Morse, 1946
		(Road Switcher) Type			
21-29	40	1500	244,000	73,200‡	Alco, 1947
36, 37	42	1500	240,980	72,294‡	Fairbanks-Morse, 1947
		A+B (Freight) Type			
51 (A&B), 52 (A&B)	40	1500	230,000	55,840†	EMD, 1946
		A+C+B (Freight) Type			
61-64 (A&B)	40	1500	230,000	55,840†	EMD, 1946
61-64 (C)	40	1500	222,910	54,349†	EMD, 1946
		A+B (Passenger) Type			
81-84 (A&B)	40	1500	241,500	58,149†	EMD, 1947

** Tractive effort with booster*
† Maximum t.e. at 25% adhesion
‡ Maximum t.e. at 30% adhesion



Locomotive of the Month:

Argentine Railway Diesels

EIGHTEEN MILLION DOLLAR export order recently received by General Electric involves the construction of 65 double-unit Diesel-electric locomotives for the Argentine State Railway. Featuring compact design with streamlined appearance the engines will be of three types, designed to meet the varying operating conditions encountered on the South American system, according to E. F. O'Dair, transportation specialist for the International General Electric Co.

Largest will be 23 twin-unit, 2000-horsepower machines, designed for operation in the Andes where maximum grades of 2½ percent ascend to a 15,000-foot elevation. Each cab will contain a 1000-horsepower Diesel engine, feeding power to 12 motor axles.

For heavy traffic on the plains, especially in the vicinity of Buenos Aires, another twin-unit type, identical in appearance but having 8 motor axles and 2 idlers, will be constructed. The 12 engines in this group will also house a 1000-horsepower Diesel in each cab.

Courtesy General Electric

Sixty-Five General Electric Growlers to Haul Heaviest Meter-Gage Trains Ever Operated Over Vast Pampas and Andean Hump

The remainder of the order, consisting of 30 twin-unit locomotives, will employ two 500-horsepower Diesel engines per cab, making for a similar 2000 horsepower total. Like the second lot they will deliver power to 8 sets of traction wheels, the central axle on each 6-wheeled truck being an idler.

All 65 locomotives are to be constructed at GE's Erie, Pa., plant, where the first Diesel engine has already been put through exhaustive tests and all auxiliary equipment assembled.

Developing greater horsepower per locomotive ton than any meter-gage machines previously designed, these handsome haulers will enable the Argentine State Railway to operate heavier trains on faster schedules, adding materially to the capacity of the system and affording new standards of rail service. The pattern is a direct result of six months' study which the IGE transportation specialist made in Argentina last year. With construction already under way, deliveries are scheduled to begin during 1949.

Some Had Luck

By EDMUND E. PUGSLEY

LAST WINTER the roof fell in on the abandoned roundhouse at Rogers Pass, one-time railway summit of the Selkirks. The season's snowfall of 544 inches had proved too much for it. Young timber is steadily closing in on the remaining concrete walls. Rogers Pass, scene of the greatest drama in Canadian railway history, will soon be only a name that recalls a 30-year battle against the the Snow King. Or, since there is already a generation of mountain railroaders who don't know that the orginal spiral route drew a gratitude bonus of $5000 for the discoverer and who only shake a puzzled head over the great Loop from the West, the name may in time recall nothing to its hearers and the laborious spiral come to be referred to as the great Rogers Puzzle.

There'll be more in such a reference than is meant, perhaps. Looking back with today's hindsight, it is impossible to understand how doughty U. S. Officer Rogers could so easily sell the prohibitive route as a link in a transcontinental railway. A further riddle is how the location engineers found a feasible reconciliation between the pass and the Illecillewaet Valley, 6000 feet immediately below. And it is a final

The lantern's rays shone down over a dark bundle lying on the snow

and never-to-be-solved riddle how mortal men held that pass and moved trains against the elements over such a fantastic maze of curves and trestles for 30 years.

Many of those men lost the battle and took the swift route to the little headstone village down by the tranquil Columbia. The rest had luck. For long, grinding seasons they played tag with death day after day and won. A few saw the grim hand reach out to tap them and then, by some weird trick of fate, found themselves still alive and safe.

Of those who worked the old pass and survived, a number are still scattered throughout the West. John Jenkins, resting contentedly on pension at Vancouver after 44 years of locomotive service, had luck all the way. He's one of the few who can say "I was there" about the big slide of January 31, 1899, when the station, roundhouse, water tank and a dozen or so freight cars were scattered across the valley like matchwood in a few ticks of a watch.

"I suppose it was my lucky day, all right," Jenkins agrees. "It was my 32nd birthday, anyway. But you can take it from me it wasn't a very happy birthday present for a man to wake up and find seven of his good friends have been killed while he takes a nap. But that nap probably saved my life, for I might have been in the roundhouse with my engine if I'd been on duty.

"We had a coal passer named Frank Vago who was always joking about the slide that one day would clean up on us all. And it seemed queer that Frank was right there on the station platform when that slide finally struck. You get to think of the mountains up there as a vicious set when you're living right under them, but when they get forty or fifty feet of snow hanging on them, it's no wonder they have slides. The wonder is that the snow sticks on them at all.

"Frank seems to have been the first one to see it coming that day, just before noon. He yelled to the agent. 'Cato, come see the big slide! Guess she go dis time for sure, huh!' Cato ran out, but not to see the slide. He snatched up his two wee kiddies from the platform and ran back inside. That was the last anyone saw of the Cato family, man, wife and children."

Jenkins paused a moment, staring thoughtfully before resuming. "Luck is queer, sometimes. Maybe if Cato had waited to look at the slide he might have lived to tell about it. The slide, or perhaps the terrific wind that preceded it, hit the station just as Cato closed the door, and away went the whole building. But Vago was caught when the station platform buckled around him, so he got out alive and okay. The four Catos were carried away with the building, along with a Chinese cook and the night operator asleep upstairs —Corson. Some say the Chinaman was found with only his head under the snow,

Engineer John Jenkins, ***extreme right,*** one of the ones who had luck all the way, posed with the 313 and crew on the turntable at Rogers Pass in 1897

but the chances are he was suffocated before that.

"Upstairs in another bedroom, a waitress named Annie Burger had just time to run to her window before the slide struck. The rescue gang found her huddled under the station roof gable with enough air space to keep her alive. Her only injury was a broken leg. And a canary, a cockatoo and a little wire-haired terrier all came out alive. I remember how that dog ran around scratching and whining for the two kiddies for days afterward.

"Over at the roundhouse there was another example of how luck works for some. A carpenter named Wrigley was carried away with engine 409 and killed. His working partner, Jack 'Rocky Mountain' Barnes, was blown out the other end of the building without a scratch."

The old engineer paused, and then resumed, "This luck stuff takes a long time to catch up on some of us. I had a fellow named Jack Manley firing that little 409 for me up there on the pass. He never got a scratch in all that grief. Then, twenty years later, he was caught with that wreck gang in the Downey slide job and killed when a tender ran away and trapped them . . .

And then there was George Govett who was always careful and always getting into a jam through no fault of his own. A switch split once under a baggage coach and ditched his passenger train. Another time he ran into a washout with his whole train before he could get stopped. Things like that dogging him all the way. . . And Billy Evans was another in taking two long dives into Fraser canyon with his engine, once over three hundred feet. . . And Horace Currie was another. Yes, I guess I was pretty lucky."

But those who knew Jack Jenkins on his engine will tell you it wasn't mere luck that took him through for 44 years without serious accident. He had a record for being careful all the way and a deep prejudice against liquor on or near the job.

ANY railroad that requires five plow crews and 150 men in regular snow service over 15 to 20 miles of zigzag track has a big pile of potential trouble hanging over its front doorstep. Each year more heavy-timbered sheds were added on Rogers Pass. And each year the snow man played tricks with them, dropping a few thousand tons down here and there in the most unlikely places. Men got to look for these snow deposits as a part of their daily entertainment—from a discreet distance. And that's what one of the plow crews was doing the morning Horace Currie's engine lost the battle with a slide.

"It was a grand sight!" Horace insists, "watching half a mountain of snow tumbling down just across the valley. A grand sight for about a minute! Then, before we could turn tail and get out of there, the danged slide had filled the little valley full and spilled it all over the edges and right on over us. After that the light went out for me, and half a dozen others."

The light stayed out for the six others that day. Currie was lucky because a spare shovel gang was close by to start right in digging where they'd last seen his engine. It took half an hour to find him and he was black in the face, but they were able to revive him. After that the scenery on Rogers Pass wasn't so attractive to Engineer Currie. He soon used his seniority to take work down the valley and in time he became one of North America's roving boomers. Today, in his gay nineties, he is still the life of the pensioners' picnics or banquets.

Engineer Lou Patrick was another man who had luck. Once at least the premonition of his wife was responsible. Patrick was called for his regular run over the Pass back in 1908, and was astonished when Mrs. Patrick—herself a former telegraph operator in a crude box-car station—pleaded with her husband to ask for relief for the trip. He finally agreed. A few hours later the shop whistle at Revelstoke sent out its weird wreck call, and the Patricks learned with awe that his engine had been caught in a slide and the engine crew killed. Luck for one had

A spare shovel gang saved Engineer Currie; but for six other men the lights went out permanently as No. 305 fell under half a mountain of snow.

meant death for others. Eight years later Lou Patrick pulled the first passenger train through the great five-mile Selkirk tunnel that gave railroadmen the chance to thumb noses at Rogers Pass. The little town of Donald, down by the Columbia river, midway between the Rockies and Selkirks, was still divisional nerve centre the day General Superintendent Marpole and District Superintendent Duchesney both reached boiling heat before the fireman responded to the wreck call at Donald shops. Every other man was there in his place ready for full speed to Rogers Pass to dig out a locomotive that had been caught in a snowslide. Mr. Duchesney took time to warn Fireman Brundart that he was due for a stiff penalty for delaying the train; then they roared out of town for the 30-mile climb to the pass, every man tense for the dread job ahead.

They didn't reach their objective that day. The train stopped abruptly half a mile from the scene of the buried locomotive, and the officials floundered ahead to see what was wrong. A fresh slide occupied the railroad as far as they could see. It didn't need much study to realize how close they had come to being underneath this fresh slide—only the time they had been delayed by the fireman at Donald had saved them.

Two officials gazed at the slide a long time and then turned to look up at the fireman.

"Brundart," the divisional commander spoke gravely, "I guess there was another hand than yours in charge this morning to keep you late for your call. We can all be very thankful for that delay now. . . So, we'll just forget what I said before we started."

After the station was destroyed, Rogers Pass village was moved a mile or so westward and a new station built on a spot chosen for its immunity record. Across the pass hump more and more snowsheds were constructed and the track was carried as nearly as possible through the canyon centre and elevated on a high gravel fill. Big trouble gave way to less and less calls for the emergency outfit. Then came the spring of 1910 and the great blizzard that swept through the Selkirks and Cas-

cades leaving a trail of devastation and death on both sides of the international boundary.

On the Great Northern Railway just south of the border, all trains in the region of Wellington tunnel were blockaded after February 21st for 24 days, trapping three passenger trains just outside the tunnel directly beneath a mountain wall about 2000 feet high and laden with many days of continual snow. At two o'clock in the morning of March 1st, the tons of snow broke loose. The three trains with their 96 luckless occupants were picked up and carried like cordwood sticks another thousand feet down the mountainside to total destruction.

Rogers Pass and Revelstoke in British Columbia whispered reports from Wellington of bodies dug out and slid down the mountain in blankets to a lower level. The storm continued unabated. More men and more plows were added. Passenger trains suffered more and more delays, spent more and more time waiting securely in sidings.

Then came March 4th, and the mountain division knew what had happened at Wellington could happen there, too.

At Revelstoke, 45 miles west of Rogers Pass, engine 1751 had been turned in for a boiler washout. Engineer W. H. Phillips and Fireman E. W. La Chance called at the shops to take over their engine and return to pusher service over the pass. But their orders had been changed, and instead of helping the eastbound passenger train, they were given a rotary snowplow. The pass was alive with slides, they were told.

They blasted up around the big Loop into Glacier and there passed the eastbound passenger train of the previous day—tucked away in a siding, waiting advice that the line was safe to proceed. The 1751 crew drove by and into the drifts and slides up around the base of Mount Avalanche, picking up a shovel crew of about 55 men. Nearing the top of the grade, they struck a cut filled with snow and trees from the opposite slopes of Mount Cheops. The trees stalled the rotary and Conductor Buckley ordered it backed out of the cut while Roadmaster Johnny Anderson's shovel gang went in to work with their axes and saws. Anderson watched his crew for a time, then started to trudge back down the hill to a watchman's telephone to report progress to a harried dispatcher.

An hour later, when he came back, he thought he must be having a nightmare. There was neither railroad nor rotary, locomotive nor men. Nothing but a new mountain of snow where the railroad ended. He stumbled blindly around, looking for some sign of men or machine, until he decided it was hopeless. He was starting back down the track when he heard something like a faint call. He stopped and listened and stared around him. Then he saw a bundle of something on the snow and ran to tilt his lantern over it. It was the fireman of the locomotive, Bill La Chance.

"Bill!" Johnny croaked. "What happened? Where are all the rest of them?"

Bill La Chance stirred and tried to sit up. "I don't know," he gasped. "But I'm afraid. . . afraid they're all gone!"

BILL LA CHANCE lives in Vancouver today and works his trade at steam engines—the stationary type. It's been 37 years since that March night when he rode out the great slide of Rogers Pass, the one lone man of 59 tossed back alive, but he is still reluctant to talk of it and of the miracle that saved him.

"It was just about eleven o'clock that night when we got the signal from Dick Buckley to pull the rotary back out of the snow cut and let the gang go in with the axes," he recalls. "I was firing the 1751 for Wm. H. Phillips and he waited for me to put in a fresh fire when we stopped; then we were going to sit down and eat our lunches. He stood near me against the boiler, talking about the bad slide down on the Great Northern. I was doubled over my shovel when a burst of flame came out of the firebox. It struck me like a flash it must be a boiler explosion. Then, before I could straighten up, there was a

Below, facing sundown, is Rogers Pass station where four of the Cato family—pictured on the platform with the crowd—went west on January 31, 1899. Night Operator Corson slept to death upstairs. Buckling of the platform around him saved Frank Vago, who peered down on a waste of snow shrouding the splintered station, roundhouse and water tank. In the scene above only scattered boxcars show

puff of snow in my face and I knew it for what it was—a snowslide.

"I never got straightened up. I was just grabbed and jerked right up out of that cab and on up out of the deep snow cut. Then it felt as though I was being pulled from every direction at once. Some instinct made me cup my hands over my face and I suppose that's really what saved me from complete suffocation. My right leg was twisted like a corkscrew and it felt as though the whole mountain was rolling over me for a while. Then that stopped and there came a different sensation, like a boiling movement, with me right in the middle of it, coming steadily toward the top. It was like eternity, but at last it opened up and I was pitched out of it all and was laying there right on top and breathing good old air again.

"It was all quiet again then and I laid there, trying to get my breath normal and to think it out, and see how badly I was hurt. I was afraid to move at first, thinking I was all battered up inside. I was spitting blood, and was soon getting numb from the cold. A man couldn't last long like that, I was sure. I tried to look around but couldn't see anything but snow. I tried to shout, but there was no one to hear me. There was simply no hope, I was sure.

"Then suddenly I saw what looked a little like a lantern light. I stared at it and it seemed to be moving. I wiggled around and sat up, letting go with everything I had in one big yell. The light stopped, then moved again, but it was coming toward me and I yelled again. And next thing I knew there was the lantern shining right in my face and a man talking to me. I guess, maybe, you can understand how that lantern of Johnny Anderson's was just about the brightest light of all my life!

"Johnny helped me sit up and asked a lot of questions, but I couldn't tell him anything but what had happened to me. I found that the blood in my mouth was coming from a cut over my eye, and my worst injury was on my left leg where it had been badly gashed—probably when I was yanked out through that cab door and struck the sharp iron edge. That leg still carries a deep scar."

The 58 other men who went up Rogers Pass that night with La Chance died right there in the flash that swept La Chance from his engine cab to one of the world's weirdest rides. Engineer Phillips was found on his feet beside the engine boiler where he stood talking with his fireman. Conductor Buckley and his new brakeman perished in their caboose. Four Japanese workmen who had been riding on top of the engine tank were not found till the spring thaw gave them up far down the mountainside. The others, including 28 more Japanese, were uncovered as they stood or stooped in that snow cut, shovels, axes, saws or cigarettes in hand, faces flushed with their natural exertion.

Fireman La Chance stayed on in engine service for three years after that night, then went down the hill to try to forget it in a different life at the coast.

"A man sees all that snow, and the new slides, and he gets to feel like he couldn't take another chance like that," he explained quietly. "It's like tempting Providence too far. It stays with you too vividly—a thing like that. Phillips was just about the finest fellow a man could ever work with. So was Johnny Anderson, the roadmaster. I believe Johnny is on the E&N Vancouver Island now, or perhaps he's retired. He lost a brother in that slide."

MOUNTAIN MEN looked glumly at Rogers Pass after that and shook their heads, wondering what the railway officials would do. Something had to be done to eliminate this killer, that was certain. But what? That was the year the twin spiral tunnels were being completed in the Rockies to stretch the hazardous Big Hill by four miles and reduce its grade from 4.4 to 2.2 percent, at a cost of 1½ million dollars for the one mile and a half of tunneling. Perhaps that's why talk of a tunnel under Rogers Pass grew more persistent. Then one day in 1912 Revelstoke thrilled to official news: the

tunnel had been approved and Rogers Pass would go back to the grizzlies.

Three and one-half more years saw train Number One roaring up the one per-cent grade on December 9, 1916, with Conductor Armstrong and Engineer Lou Patrick and helper Engineer Dan MacLeod in charge. They made the five-mile trip from east to west portal in 18 minutes, and at last the great double-track job was a reality at a cost of 10 million dollars.

The black hole of Connaught eliminated the pass to the goats and grizzlies and the watchful care of the National Parks' men.

There was trouble right in the big tunnel with falling rock until engineers found a way to seal it off behind a cushion of slabwood and concrete. And they had tunnel trouble at Palliser in the Kicking Horse when a cave-in trapped and killed two engine crews.

They had trouble keeping abreast of increased tonnage with roadbed and bridges and spent a tidy sum in renewal of great

Remains of roundhouse and the 409's tender after they'd cleared the white lava away

a curvature of seven complete circles over Rogers Pass and reduced the distance by four miles. It eliminated, too, one of the world's greatest scenic views—the great Hermit group and the Asulkan Glacier, seen only at their best from the old pass some 552 feet above the present stop at Glacier. Who can estimate the lives spared since the battle of Rogers Pass ended?

But like the colorful "Willie Jim" MacDonald, or today's senior conductor in mountain service, Al Urquhart, or the latter's veteran father, can testify that not all the troubles of mountain men were over when Al booked in the last carload of reclaimed steel rails that turned back

steel spans over yawning mountain rivers. Trouble that cost the lives of Enginemen Woodland and Griffiths on January 28, 1929, when their heavy mountain locomotive crashed through the outmoded Cutbank bridge to a drop of 140 feet while a new bridge was already under construction. And slide trouble, of course, in plenty. In a valley like the Illecillewaet, slides sometimes come down without casualties, like the job of 1933 that wearied of altitude and took over 1500 feet of railway to a depth of 57 feet. But often they come in swift, dry-slide form to snatch at men and machines, like the Albert canyon slide of 1935 which picked up a 350-ton locomotive and caboose with crew and

tossed them into the canyon beneath 30 feet of snow, leaving plow and spreader unharmed on the rails. Conductor Jack MacDonald and Fireman Christopherson died in that one.

There's trouble with washouts, too. Take September, 1931, when the Illecillewaet river broke through its diversion dam and gleefully romped down its old bed into the Connaught tunnel mouth for nine days before a gang of a hundred men could persuade it to go back and be good. Or the Three Valley washout that turned the railroad into a giant dipper.

But today a thousand men and 65 locomotives burning 1560 barrels of oil are doing a might good daily job at moving a thousand or so freight cars and nearly a dozen passenger trains over this solid roller-coaster division with a casualty record that any railroad district might envy.

Some still have better luck than others. But none know better than these sturdy mountain men, who climb the Illecillewaet and Beaver to undercut old Rogers Pass through the black hole of Connaught, that you need to do your railroading—every minute and every mile—by the book or better in the mountains.

The old Pass is quiet now in summer, except for the scurry of a grizzly as he scrambles for blueberries. Or perhaps a bear will pause at his meal to stare curiously as a woman trudges along the old right-of-way. That will be Mrs. Phil Parker, who once taught school at Illecillewaet, and still thinks the view from Rogers Pass is well worth the ten-mile climb, with a premium of half a hundred varieties of wild flowers thrown in. But only a very close search will find the old stone abutments that carried trains to and from Rogers Pass by the great Loop. Soon the Rogers Riddle will be forgotten.

Where Beauty dwelt with Terror. Mounting from Illecillewaet on the west, the Old Loop gained elevation for Rogers Pass, on the rim of the distant mountain in background

Not in the Wheel Report **By JOSEPH EASLEY**

No . . . No . . . Mac! That's the sugar . . . Salt's over there . . .

J. R. Bernard, 656 Oriole Pkwy., Toronto 12, Ont.

Toronto's No. 411 tops the grade near North Toronto terminal along North Yonge route. Hydro-electric shortages caused delays and eventually abandonment last October

Electric Lines:

Feature Article Index

1942 — 1948

FOR the benefit of those who may have missed some issues of RAILROAD MAGAZINE over the past 5 years and who are not certain in what issue a particular Electric Railway story appeared, we present an index of all featured juice articles since the department was inaugurated.

Juicefan readers who missed any of these featured stories may still be able to obtain them by referring to the *Switch List* in each month's issue of RAILROAD MAGAZINE, and then contacting the individuals offering the particular magazines they want.

Electric Lines Feature	Date Appearing
ABANDONMENTS OF 1946 *(listing)*	March, 1947
ALL-ELECTRIC STREETCAR *(PCC type)*	February, 1946
AMERICA'S SHORTEST STREETCAR LINE*(Filt.Plt.Ry.)*	January, 1947
ARIZONA ELECTRIC RAILWAYS *(listing)*	August, 1946
BIRNEY CARS	August, September, 1944
BOSTON ELEVATED RAILWAY	October, 1946
BRILL: PIONEER BUILDER OF STREETCARS	February, 1948
BRITISH COLUMBIA ELECTRIC RY.	October, 1946; March, 1948
CABLE CARS OF SAN FRANCISCO	November, 1945
CAMBRIA COUNTY, FORGOTTEN LINES OF	May, 1948
CANADIAN TROLLEY ODDITIES	November, 1943
CAPE BRETON TRAMWAYS	July, 1944
CHAUTAUQUA LAKE ROUTE *(JW&N)*	May, 1946
CHICAGO, AURORA & ELGIN	January, 1946
CHICAGO, NORTH SHORE & MILWAUKEE	July, 1947

Electric Lines Feature	Date Appearing
CHICAGO RAPID TRANSIT *(fiction stories)*	March, 1944 and June, 1943
CHICAGO RAPID TRANSIT *(Leading the Hotshot)*	August, 1948
CHICAGO, SOUTH SHORE & SO. BEND	October, 1945
CINCINNATI CURVED-SIDE CARS	June, 1946
CINCINNATI, GEORGETOWN & PORTSMOUTH	May, 1945
COMBS MONORAIL LINE	September, 1947
CONNECTICUT COMPANY	April, 1947
CROSS ISLAND TROLLEY *(Huntington, L. I.)*	October, 1944
CURVED-SIDE CARS	June, 1946
DAISY LINE *(Louisville & New Albany)*	July, 1946
DELAWARE-MAINE TROLLEY TRIP	November, 1948
DOUBLE-DECKER CARS	June, 1943
EAST BAY TRANSPORTATION	October, 1947
EASTERN OHIO TRACTION CO.	March, 1946
ELECTRIC RAIL TERMS	November, 1942 thru April, 1943
ELECTROCUTED—BUT STILL ALIVE	June, 1947
EMPIRE STATE TRACKAGE *(list of N.Y. lines)*	February, 1945
ERA OF WEST VIRGINIA TROLLEYS	September, 1948
FAIRMOUNT PARK TRANSIT	December, 1946
FAST TRAIN TO TOMORROW *(Electroliner)*	July, 1947
FILTRATION PLANT RAILWAY *(Mpls.)*	January, 1947
FLORIDA ELECTRIC RAILWAYS *(listing)*	December, 1946
FORGOTTEN TROLLEYS OF CAMBRIA (Pa.) COUNTY	May, 1948
FORTY YEARS AGO IN CALIFORNIA *(Nevada County)*	December, 1944
GONE WITH THE FIVE-CENT HERSHEY BAR	August, 1947
HAGERSTOWN & FREDERICK RAILWAY	March, 1945
HERSHEY-CUBAN RAILWAY	November, 1946

Robert W. Richardson, 477 E. Market St., Akron 4, O.

Dead end at Yorkville, O. for Cooperative Transit's last fantrip with No. 562 and 67

HERSHEY TRANSIT CO.	August, 1947
HIGH-SPEED OPERATION IN LARGE CITIES	February, 1947
HIGH WATER ON GREAT SALT LAKE *(SLG&W)*	December, 1948
HOBBLESKIRT CARS	February, 1944
HUDSON & MANHATTAN RY.	November, 1947
HUNTINGTON (L.I.) RAILROAD	October, 1944
INTERURBAN RAILWAY & TERMINAL CO.	December, 1947
INTERURBANS *(examples and definitions)*	April, 1945
INTERURBANS, TWILIGHT OF THE	July, 1948
ITHACA RAILWAYS (N.Y.)	June, 1947
JAMESTOWN, WESTFIELD & NORTHWESTERN	May, 1946
KEY SYSTEM	October, 1947

Connecticut Valley Chapter, NRHS

Connecticut snow scene about 1905 with Consolidated Ry. 106 at South Coventry

Electric Lines Feature	Date Appearing
LAST OF THE CABLE CARS	November, 1945
LEADING THE HOTSHOT *(CRT)*	August, 1948
LISTING OF STREET & INTERURBAN LINES *(1943)*	May, 1943
LISTING OF STREET & INTERURBAN LINES *(1945)*	December, 1945
LISTING OF STREET & INTERURBAN LINES *(1948)*	January, 1948
LOUISVILLE & NEW ALBANY RY.	July, 1946
MANHATTAN'S EARLY RPO LINES	June, 1948
MARION (Ind.) RAILWAYS	January, 1943
MARKER LIGHTS *(fiction)*	March, 1944
MILLIONS FOR HUB TRANSIT *(Boston El. Ry.)*	September, 1946
MILWAUKEE ELECTRIC RAILWAY & LT.	April, 1943
MONORAIL LINES	September, 1947
NEVADA COUNTY TRACTION CO.	December, 1944
NEW JERSEY BEACH RAILWAYS	September, 1945
NEW YORK-BOSTON TROLLEY ROUTE	December, 1943
NEW YORK-CHICAGO TROLLEY ROUTE	March, 1943
NEW YORK ELECTRIC LINES *(listing)*	February, 1945
NORTH COAST LINES, ROSTER OF	June, 1944
OKLAHOMA RAILWAYS	June, 1945
OPEN TROLLEYS	August, 1943; August, 1945
OREGON TRAIL *(Portland Elec. Pwr.)*	May, 1947
OUR OWN LINGO *(electric rail slang)*	October, 1943
PACIFIC ELECTRIC RAILWAY	January, 1944
PHILADELPHIA RAPID TRANSIT	February, 1947
PITTSBURGH RAILWAYS CO.	May, 1944
PORTLAND ELECTRIC POWER CO.	July, 1945; May, 1947
POTOMAC REGION TRACKAGE	April, 1946
RIDING THE RUNNING BOARD	August, 1945
ROCHESTER SUBWAY	October, 1948
SALT LAKE, G&W *(High Water on Great Salt Lake)*	December, 1948
SOUTH SHORE LINE *(CSS&SB)*	October, 1945
SOUTHERN CAMBRIA RAILWAY	April, 1948
SUNSET LINES *(CA&E)*	January, 1946
TEXAS ELECTRIC RAILWAY	November, 1944
THIRD AVENUE *(N.Y. City)* R. P. O. CARS	June, 1948
TROPICAL INTERURBAN *(Hershey-Cuban Ry.)*	November, 1946
TWILIGHT OF THE INTERURBANS	July, 1948
TWIN CITY LINES *(Inter-Campus Route)*	August, 1946

Electric Lines Feature	Date Appearing
TRI CITY TRACTION COMPANY	September, 1944
TROLLEYS UP ONTARIO WAY	September, 1943
UNIVERSITY-OWNED STREETCAR *(U. of Ill.)*	July, 1943
UNIVERSITY-OWNED TROLLEY LINE *(TCL)*	August, 1946
URBAN INTERURBAN *(Louisville & NA)*	July, 1946
VESUVIUS *(Italy)* RAILWAY	January, 1945
WATERVILLE *(Me.)* STREET RAILWAY GROUP	November, 1948
WEST VIRGINIA TROLLEYS, AN ERA OF	September, 1948
WHEELING ALONG THE SOUTH SHORE *(CSS&SB)*	October, 1945
WORLD'S BUSIEST CROSSING	June, 1943

Carbarn Comments

Steve Maguire

ONE of the most frequent requests made to our office is for information regarding periodicals and bulletins in the electric railway field. It seems evident that there are many juicefans who have not yet been able to learn the identity of the various railfan groups and who are therefore unable to take advantage of the continuous stream of very valuable historical material being sent out to the public, along with up-to-the-minute news of current events in the field of electric railways.

In answer to these frequent requests, we are listing below a recommended group of publications issued by railfans or by railfan groups alone. Since the demise of *Transit Journal* in 1942, there has been no recognized leading trade magazine in the electric railway industry. Closest rival to *Transit Journal,* is the trade paper known as *Mass Transportation,* published by Kenfield-Davis Pub. Co. in Chicago, Ill. However, *Mass Transportation* is primarily concerned with buses and its references to existing railway lines are not too frequent. The outstanding electric railway publications of the present day are:

Headlights: monthly publication of the Electric Railroader's Assn., Lackawanna Terminal, Hoboken, N. J., issued free to members, $2.50 per year to others. Printed in part, with other pages mimeographed, it usually runs 16 pages. Has news of electric railways and illustrated short articles.

Headway Recorder: published in Washington, D. C., emphasizes news from that vicinity, along with other U. S. railway news. Contains 8 mimeographed pages in its monthly issues. Subscriptions can be had by addressing the paper at 6504 Barnaby Street NW, Washington 15, D. C. Cost is $1.00 per year.

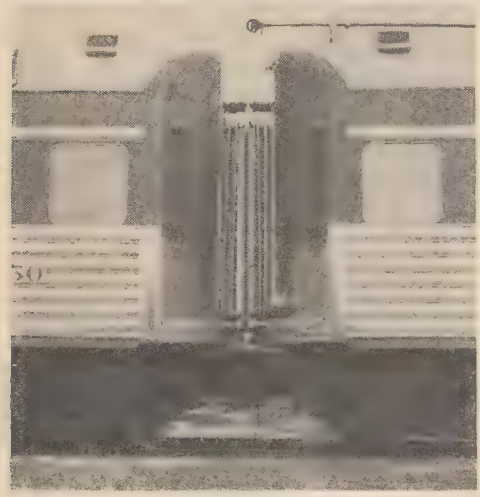
Interurbans: a bi-monthly published by Ira Swett, 1414 S. Westmoreland Ave., Los Angeles 6, Calif. Contains news of electric railways, short articles and illustrations. Usually runs 8 printed pages. $1.50 per year.

Transfer Collector: bi-monthly publication primarily for trolley and bus transfer fans, but regularly containing news of railways. Generally runs about 5 mimeographed pages. Issued by Chas. Jones,

Bill Schmidt

KCPS juice jack gives 4 new trolley-buses a lift along Westport line. Kansans are continuing their battle for streetcars

Paul Stringham, Peoria, Ill.



City of Decatur, **Illinois Terminal's silver and blue streamliner, gets a quick exhibition shine in E. Peoria yard, prior to inauguration of Decatur-to-St. Louis service on Nov. 7. New 3-car train is ITS' first postwar speedster.** ***Left:*** **Closeup of vestibule arrangement**

2920 W. Master St., Philadelphia 21, Pa. Subscriptions are $1.50 per year.

Transit News: monthly publication of Ronald Kupinsky, 2707 Morris Ave., Bronx 58, N. Y., covers field of electric railway and bus news. Usually runs 8 mimeographed pages and carries short articles on railway subjects. Subscription rate is $1.00 per year.

Trolley Sparks: bi-monthly publication of Central Electric Railfans Assn., Box 503, Chicago 90, Ill. Each issue covers varied assortment of subjects in electric railway field with occasional news items. Issues are printed and well-illustrated and vary in length from 16 to 60 pages. Last issue carried a complete listing of every piece of electric railway equipment bought between 1906 and 1948 in its 72 pages. Issues are free to members paying $2.50 yearly dues. Individual copies may be obtained from CERA at above address.

Intended for both steam and juicefans, the following papers devote a fair amount of space to electric railways:

NRHS Bulletin: quarterly publication of the National Railway Historical Society carries news and features articles on steam and juice subjects. Usually contains 30 printed pages with photographs. Issued free to NRHS members paying $2.00 annual dues. Information may be obtained from E. L. Pardee, 626 Park Ave., Collingswood, N. J.

Western Railroader: monthly publication for Western railfans. In 8 pages it presents news of steam and juice lines of the far west. Issued by Francis Guido, Box 668, San Mateo, Calif. Subscription is $1.00 per year.

Michigan Railfan: monthly publication of Michigan Railroad Club, is a 4-page mimeographed sheet covering steam and electric news from Detroit and vicinity. Unfortunately issues arriving in this office do not carry address or subscription rate.

Traction Fans Directory: an 80-page listing of juicefans, giving their addresses and types of interests in the field of electric railways. This publication will undoubtedly serve to bring together many juicefans who have not realized that there are others with similar interests in their

vicinity. It is especially useful to model fans and lists model roads by name. Copies of the *Traction Fans Directory* may be obtained while they last, from the Traction Publishing Co., 3260 Nicholas St., Indianapolis 18, Ind. This group is contemplating publication of a steamfan's directory, if results indicate such would be successful. TFD costs one dollar.

* * *

LISTING of all standard-gage private and industrial electric railroads is being compiled by Walter Martin, 63 Florence Ave., Hawthorne, N. J., who asks any fans who know of industrial electrics to send him all available information on the roads. They will received a free copy of the list when it is published.

* * *

AFTER nine months' abandonment, service was resumed by streetcars on the Summit St. line of Kansas City Public Service, according to James Williams, 5915 Brooklyn, Kansas City 4, Mo.

The route uses a single car over its 4½ blocks from Southwest Blvd. to 17th Street, on a 15-minute headway. Service was resumed on September 28th last, by order of the Missouri Public Service Comm. for a 6-month trial period. KCPS Car 190, a veteran of 40 years' service, made the inaugural run on resumption of operation.

* * *

DETROIT continues to have its headaches resulting from premature abandonment of some of its streetcar runs. According to Bill Samborski, Howell, Mich., the Street Railway Department of that city has brought out figures showing that only the heavy profits turned in by the PCC-operated Woodward route have kept the system running.

Except for the $90,000 monthly profit of the Woodward line since the PCC cars went on, the company acknowledged, there would have had to be severe cuts in service on the entire system. What's more, while six other streetcar lines are making some money, less than one-third of the bus routes can keep their returns out of the red.

All of which goes to show that when the chips are down and a fair trial is given the modern cars, they just make the buses look sick.

* * *

"WHAT has become of the Bevier & Southern Ry.?" asks Hugh Lee, Jr., Omaha, Nebr., after seeing B&S Baldwin electric motor 200 and freight motor 201 in the yard of the Kaw Valley RR. at Bonner Springs.

The B&S ran electric freight over 9 miles of track from Bevier to Binckly, Mo., but, from this report, it would seem that the road had either been abandoned or had switched to Diesel operation, selling its locomotives to the Kaw Valley line. Perhaps our readers can give us word on this.

Mr. Lee also tells us that the track of the Kaw Valley freight line for about 8 miles eastward out of Bonner Springs is in very poor shape. The overhead appeared to be neglected, with plenty of un-

Duane V. Bearse, Rocky River, O.

Pittsburgh Railways' 3703, Washington interurban, emerges from tunnel with PCC 1444 at its heels

hung hangers and some leaning poles. However, inside Kansas City, the roadbed and overhead are much better maintained.

* * *

DEMISE of four more electrics must be reported. New Haven's famed Connecticut Company came to the end of the line in the early hours of the morning of September 25, 1948, when the last car carrying 45 railfans pulled into James Street barn. Connecticut's first horsecar lines were opened for service on June 18, 1859. Later, on May 1, 1888, the first electric cars ran in Derby. The Connecticut Company as a corporate entity dates back to June, 1907.

Richard Kampa, 218 Flax Hill Rd., So. Norwalk, Conn., who sends us this news, adds that the New Haven newspapers hardly mentioned the changeover—merely stating that the last run went practically unnoticed. But after the Brown-Yale football game on the same day as the last run, the *Register* stated that the 70 extra buses sent to the Yale Bowl to handle the football-crowds (replacing the famed open trolleys of years earlier), were insufficient to handle the mob, and that the passengers, as a result of the congestion, clamored for the open trolleys to come back.

Trolley coaches took the place of the last two streetcar lines in Columbus, Ohio, not long ago. The Parsons Ave. line of Columbus & So. Ohio Elec. left the rails on August 22nd, while Main & Neil streetcars gave way on September 5th. This information is from Stanley Crews, Lawrenceburg, Tenn.

The interurbans are still taking a beating, too. For some time there appears to have been a race between the Texas Electric and the Houston North Shore lines for the (in) distinction of operating the last electric interurban car in the State of Texas. Well, it looks as though Texas Electric wins out—even though it is expected to give up operation any day now. According to Charles Robinson, 607 Finley St., Raytown, Tex., the Houston North Shore line interurbans gave up to General Motors rail buses in the early evening of September 25th. Car 521 made the last trip over the 21 miles from Houston to Goose Creek.

Mr. Robinson, who with two other fans made the last run, reports that it was uneventful. There were no photographers present and no newspaper men. "They will soon find out though," he says, "for little do most of the people know of the horrible riding qualities of those rail buses."

George Chope, 1726 24th Ave., Oakland, Calif.

Portland Traction Co. managed to keep cars running during the big flood. Here's the 421 on west approach to steel bridge. Behind it, Union Station wallowed in two feet of Willamette River water

The recent hydro-power shortage in Toronto and vicinity has caused the suspension of the North Yonge Railway to Richmond Hill, Ont., now operated as a part of the Toronto Transp. Comm. When buses were placed in service to replace the trolleys on an experimental basis on October 10th, several Toronto fans promptly sent us news of the change. Our thanks to J. R. Bernard and Erie D. Edwards, of Toronto and Charles Black, Newtonbrook, Ont., for their thoughtfulness.

While the Toronto-Richmond Hill substitution was caused by the power shortage, it is also an experiment which will indicate the desirability of buses over trolleys. The general opinion expressed by the newspapers is that the buses are in service to stay. The rails along this line operate beside the road for most of the run and in the center for a small portion. Thus, the buses operate over the same street as the cars did.

North Carolina's last streetcar, the Gastonia, N. C., city franchise car Number 2, made its final run on September 18th last. Operated by the Piedmont & Northern Ry. (which, of course, still operates the interurban from Gastonia to Charlotte), this car ran back and forth on its single tract in Gastonia on a half-hourly schedule. Bob Nolan, who had been the motorman for the 30 years of the line's existence, retired when the car made its final run. We understand that the P&N has plans for a new entry for their interurban and freight line into Gastonia, which will avoid operation down the middle of the street. The P&N was featured in a photographic story in our April, 1944, issue.

News of the P&N was sent us by Phil Bush, Lenoir, N. C., and John Farmer, Lincolnton, N. C.

* * *

NINE-PAGE STORY of electrics in the State of Pennsylvania, *Trolleying Thru the Quaker State,* has been published by B. A. Long, Intermezzo House, Verona, N.J. Covering the activities of 160 railway lines in the state, this interesting bulletin sells for thirty-five cents and copies can be obtained from the author. Mr. Long has also published a two-page booklet entitled *Amazing Facts About Trolleys.* Copies may be had from Mr. Long for twenty cents each.

* * *

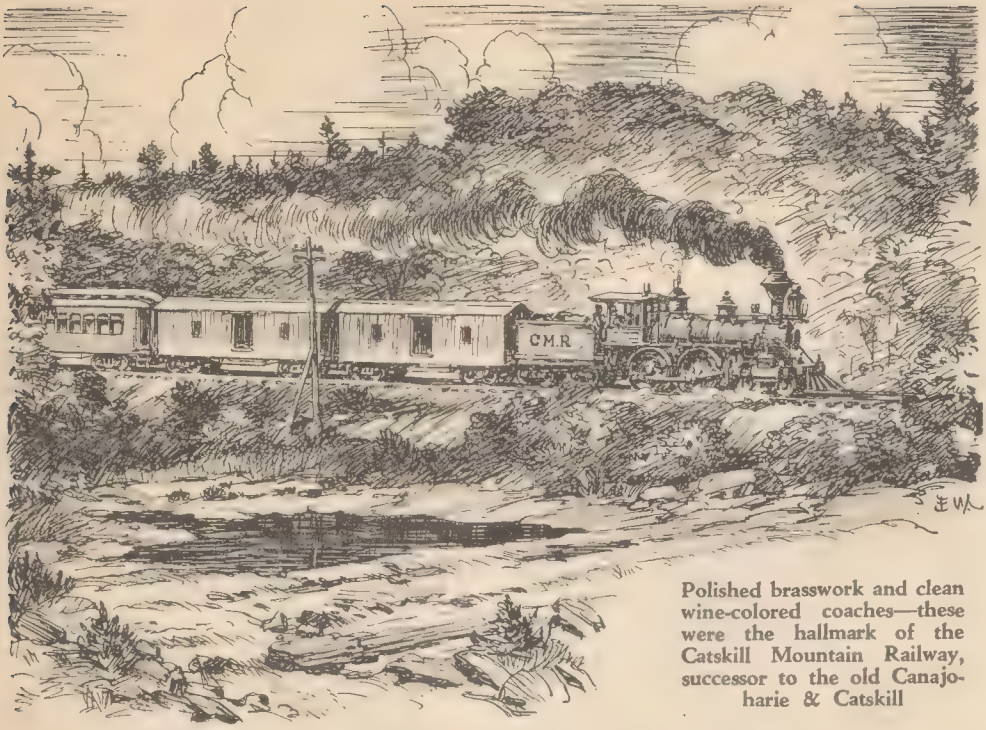
AFTER receiving ten new PCC cars, San Francisco was ready to bid on 50 more at the usual price which had been appropriated—$26,840 per car. Some faces were red when the St. Louis Car Company entered the *only* bid: $37,816 for single-end coaches.

At this rate, San Francisco's original appropriation will purchase only 33 single-end cars. By delaying their order through indecision, arguments and general confusion, it will now cost the taxpayers one million extra for the cars.

* * *

"Not a Wheel Turning", interurban fiction story scheduled for this issue, lived up to its name when it hit a production derail just before we went to press. It will positively appear next month.

Statement of the ownership, management, circulation, etc., required by the Act of Congress of August 24, 1912, as amended by the acts of March 3, 1933, and July 2, 1946 of Railroad Magazine, published monthly at Chicago, Illinois, for October 1, 1948. State of New York, county of New York, ss. Before me, a Notary Public in and for the State and county aforesaid, personally appeared Harold S. Goldsmith, who having been duly sworn according to law, deposes and says that he is the Publisher of Railroad Magazine, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the acts of March 3, 1933, and July 2, 1946 (section 537, Postal Laws and Regulations), printed on the reverse of this form, to wit: 1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, Harold S. Goldsmith, 205 East 42nd Street, New York 17, N. Y.; Editor, Henry Steeger, 205 East 42nd Street, New York 17, N. Y.; Managing Editor, none. Business Manager, none. 2. That the owner is: Popular Publications, Inc., 205 East 42nd Street, New York 17, N. Y., Henry Steeger, 205 East 42nd Street, New York 17, N. Y., Harold S. Goldsmith, 205 East 42nd Street, New York 17, N. Y.; Shirley M. Steeger, 205 East 42nd Street, New York 17, N. Y. 3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: none. 4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner, and this affiant has no reason to believe that any other person, association, or corporation has any interest, direct or indirect, in the said stock, bonds, or other securities than as so stated by him. Harold S. Goldsmith, Publisher. Sworn to and subscribed before me this 15th day of October, 1948. Eva M. Walker, Notary Public, New York County Clerk's No. 116, Register's No. 363 W-0. (My commission expires March 30, 1950.) [Seal]—Form 3526 Rev. 7-46.



Polished brasswork and clean wine-colored coaches—these were the hallmark of the Catskill Mountain Railway, successor to the old Canajoharie & Catskill

Reminder of the Past

By ARTHUR C. MACK

HAVE you ever wandered over the spot where a forgotten little railroad once gashed the rocky slope or curved politely past a farmer's woodlot? Maybe you've picked up corroded spikes and a fishplate three-quarters of a century old in your rambles; maybe you've been one of the more fortunate explorers who can claim to have discovered faint traces of disintegrated stringers that once bore strap-iron rails. Whatever your luck, whether the remains of abandoned lines consist of rusted rails like those of the Sterling Mountain Railroad in southern New York or more vague rights-of-way dating back to pioneer construction, a walk along the site of an old railroad always grips the imagination.

New York State has many such reminders of the past. Among the most unusual of these is the pike over whose right-of-way once ran two railroads, the first of which dates back more than a century. On April 19, 1830, a year before the famous *DeWitt Clinton* puffed its way over the strap rails of the Mohawk & Hudson, the Canajoharie & Catskill was incorporated at Albany. The aim of its founders was to provide a logical short cut between the Hudson River's water-borne traffic and the growing communities of the Mohawk Valley.

The Canajoharie & Catskill obtained its charter from the New York legislature after a long and bitter fight. The project was violently opposed by the Albany interests, who feared competition with Clinton's Erie Canal. But when the bill was

finally passed and the news brought to Catskill by stagecoach, it was acclaimed with great rejoicing.

The capital stock of the new railroad was to be $600,000. A subsequent act passed on April 18, 1838, authorized an issue of special certificates to the extent of $300,000. But this was in the bad days to come. The original charter provided among many other stipulations that the maximum speed of trains "is not to exceed 20 miles per hour and 5 miles per hour on crossings, and 15-minute stops are to be made at all stations."

In the silent dawn of Thursday, October 27, 1831, the citizens of Catskill were awakened by the booming roar of 13 cannon shots. An old copy of the program printed for the day shows how elaborately the occasion was celebrated. It was only the Breaking of Ground, but that meant a great deal to these people. The order of events included:

Thirteen guns at Sunrise.

Procession will be formed at 11 A. M. in front of Catskill House.

Procession will move at ringing of Church bells to a lot west of Captain Allen's house where the Ceremony of Breaking Ground will be performed by the President.

Order of Procession will be:

Marshall, Gen. John C. Johnson.

Assistant Marshall, Col. J. Olmstead.

Military Contingent.

Band of Music.

Committee on Arrangements.

Directors of the C&C Railroad.

Engineers and Assistants.

Contractors.

Trustees of Catskill Village.

Clergy and Sheriff.

Citizens Generally.

Fire Companies Nos. 2 and 3.

Youth and age together. Remains of one of the stone viaducts along the Canajoharie & Catskill's winding track. Note the irregular matching of the blocks forming the voussoirs

The yellowed pamphlets containing the Engineer's Reports are mines of detailed information on surveys and construction methods, showing that all the excitement of breaking ground was somewhat premature. It was several years before actual construction could begin. Grading was done by oxen, plows and dump carts; and local saw mills, run by water power, cut the 5x6-inch pine crossties and the long timbers upon which 2¼x⅝-inch-thick strap-iron rails imported from England were affixed by hand-made nails. The bridges were built of stone and rough-hewn timber. Eventually 27 miles of track was laid along the winding banks of Catskill Creek to the little hamlet of Cooksburg. This trackage, by the way, outdid the Mohawk & Hudson by several miles.

Work through the rugged

country with its dense forests, numerous bridges, cuts and fills had proved slower and more expensive than was anticipated. But at last the men and women and children of the Hudson River village (excepting those few who had journeyed to Albany to see the Mohawk & Hudson's *DeWitt Clinton)* were to have their first sight of a locomotive.

Oddly enough, the local newspapers, *The Messenger* and the *Catskill Recorder,* gave no description of the amazing new power. For this we must turn to a rare book written in German by Franz Anton Von Gerstner, an Austrian engineer who came to this country in 1839 to make an intensive study of American railroads. He died about one and a half years after his arrival in the United States; his painstaking findings were not published until 1842 when his widow turned them over to a Vienna publisher. Only a few copies of the book remain, and from one of these Walter A. Lucas, an authority on locomotive history, has made a translation of Von Gerstner's remarks about the Canajoharie & Catskill Railroad.

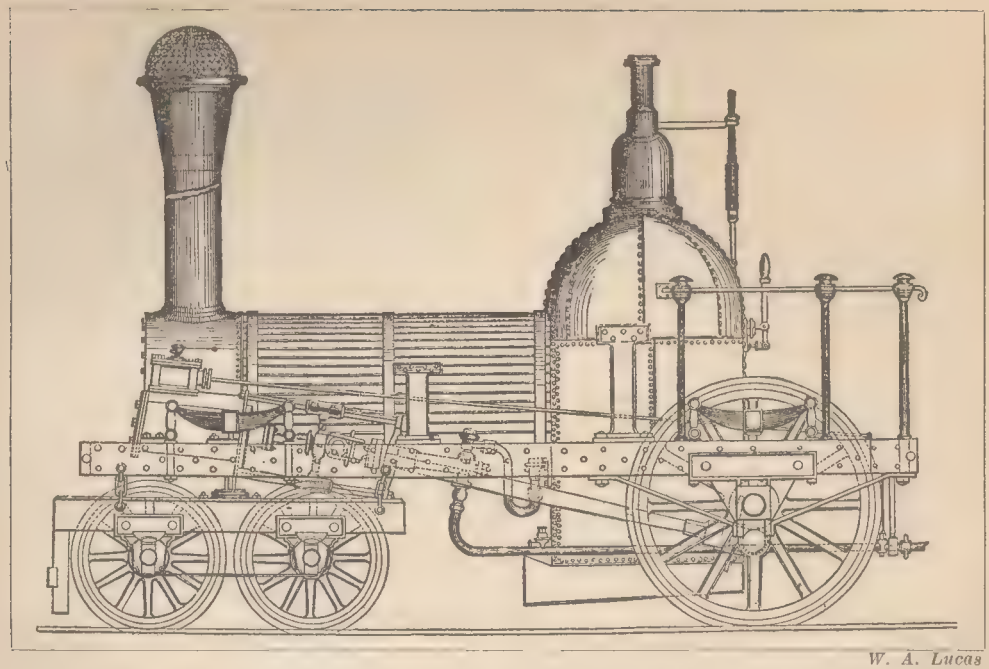
"The Canajoharie & Catskill," wrote Von Gerstner, "has one locomotive with its tender bought from H. R. Dunham & Co., New York, costing $6,300. She has cylinders 10¼x16 inches; drivers (a single pair) 4 feet 8 inches in diameter; weight, without water, 9½ tons. The other rolling stock at the end of 1839 was one passenger car and ten freight cars. The greatest grade is 1 in 66 and the smallest curvature 400 feet."

Writing to the *Catskill Recorder* in his eightieth year, Walton Van Loan, author of *A Guide to the Catskill Mountains,* described how in 1842 when a lad of eight, he rode on the Canajoharie & Catskill Railroad. "To help start the train, Hank Hibler had to attach his horse and cart to the engine. Rails would become unfastened and bend up into snake-heads upon which children would swing. Edward H. Broadhurst, who surveyed the road and lived at our house, stated that the maximum ascent was 723 feet, and on stiff grades the passengers had to alight and push the cars."

Twenty miles had been graded by 1837 and in March of the same year, rails were laid over the first section and this stretch, extending to a point near Cairo, was put in operation. The first advertisement of service, printed in the *Catskill Messenger,* is headed by a woodcut depicting a high-stacked engine with a single pair of drivers hauling a car with a stagecoach body mounted on four wheels, and announces that "the cars will run to a point near Cairo to carry delegates to the Whig Convention." The next section was opened to Oak Hill. The engine finally puffed into Cooksburg, the northern end of construction, in 1839.

Extracts from the treas-

Overland from the Hudson. The two large roads reflect transportation needs at the beginning of the last century and again toward its end. CMR, diverging from the older route near South Cairo, was primarily a tourist line



W. A. Lucas

Bicycle-drivered locomotive of the type used on the Canajoharie & Catskill and built by H. R. Dunham & Co., New York City, between 1836-'39

urer's report of expenditures have been culled from an old scrap book and reprinted by the Greene County Historical Association. Among them, we find such items as these:

May 13, 1841: $9.00 for wood fuel.

May 31, 1841: $18.47 to James Ecklor for running engine.

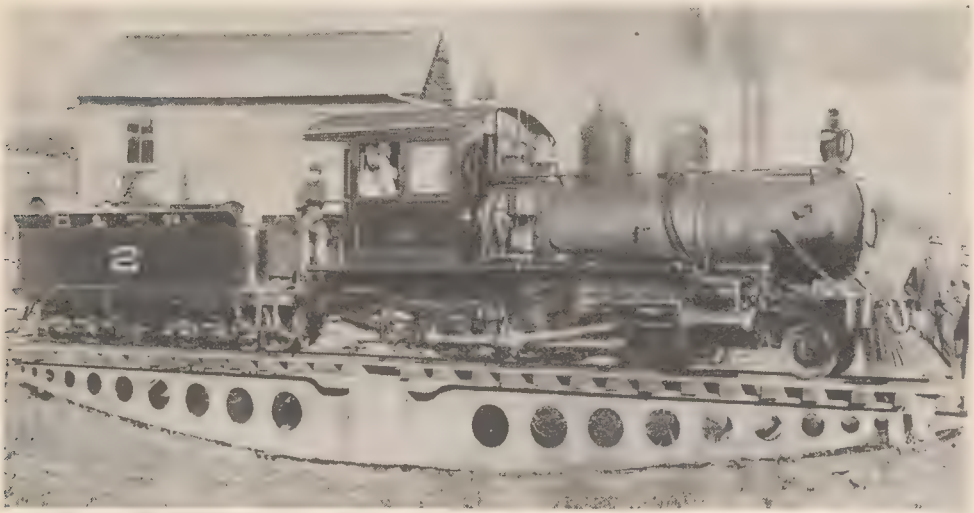
July 29, 1841: $10.00 for 4 wheelbarrows for repairing roadbed.

May 7, 1842: $7.22 for 8¼ days' work on track by Dennis Lowney.

Ambitious plans were afoot to make the Catskill & Canajoharie Railroad a link in continuous communication between New England and "the far west" of New York State. The *American Railroad Journal* of August 1, 1938, stated that Ezra Hawley, a prominent Catskill industrialist, was urging a tie-up with the new railroads east of the Hudson. The purpose could be accomplished by operating a steam ferry the five miles between Catskill and Hudson. At the latter point, direct connection could be made with the Hudson & Berkshire Railroad, completed to West Stockbridge, Mass., in September of 1838. According to the *Catskill Messenger* of May 20, 1839, the Hudson & Berkshire was operating two trains each way between its termini. The Hudson line, however, was soon absorbed by the Western Railroad, now the Boston & Albany, and through service was provided from Boston to Hudson in 1841. A year later, the Housatonic Railroad, building northward from Bridgeport, Conn., tapped the Hudson & Berkshire.

There was an alternate proposal to construct a railroad from Canajoharie southwestward to a connection with the Erie Railroad, but this plan, like the other, was never realized. The funds necessary to extend through to Canajoharie could not be raised. Freight traffic decreased. Freshets swept away trestles and the last train went through a wooden bridge between East Durham and Oak Hill in 1842. The road was sold to the Catskill Bank for $11,000 and junked by Hiram Van Steenburg. The engine was converted to stationary power for hoisting ice at the old Catskill Point ice house.

The *Alfred Van Santford*, CMR's No. 5, was Rogers built in 1912. After six years of service, she was sold to a distant narrow-gage line



One of the Catskill & Tannersville's second pair of 2-6-0s, the *Alfred V. S. Olcott*, like its mate, the *Isaac Pruyn*, was a Baldwin product of 1900

Charles L. Barker, an old resident of Catskill, saw the engine when he was a boy, before a fire destroyed it. The only reminders left of the C&C are moss-covered stone bridge arches near Oak Hill, and dim traces of cuts and fills.

NEARLY half a century after the Canajoharie & Catskill folded, its ghosts were rudely disturbed by another rail road that plumped its ties and steel right down on the ancient line's right-of-way. The Catskill Mountain Railway came into being in 1880. The original surveyors for the C&C had done such a good job that the new road followed the old grading to South Cairo, where it diverged westward on its own right-of-way to the foot of the mountains. Three iron bridges over Catskill Creek occupied the sites of the Canajoharie's old wooden trestles.

This new pike was the brain-child of Charles L. Beach, who was elected its first president on September 16, 1880. In his younger days, Beach had re-organized and put on an efficient basis the stagecoach lines operated over the post road between New York and Albany. For many years now he had owned the historic Catskill Mountain House, one of America's most famous resorts.

Access to this imposing place, with its

white Grecian columns and unsurpassed view of four states from the mountain tops, was extremely difficult. A heavy summer tourist traffic came to Catskill by steamboat, then by the Hudson River Railroad and finally by the West Shore Railroad. But at Catskill the traveler still had to board stagecoaches for the slow and laborious trip to the summit of the mountain. Toward the top, grades were so steep that passengers were obliged to alight and walk.

Beach realized that a railroad in the mountains was a modern necessity. Construction was pushed ahead and in the summer of 1882 the first regular train ran over the Catskill Mountain Railway, stopping at each of the ten neat little stations between Catskill Landing and the western terminus at Palenville.

Two 4-4-0 Dickson 3-foot-gage locomotives equipped with Eames vacuum brakes hauled the first passenger cars, which had Janney couplers with foreign-type disk bumpers. The freight cars were provided with link-and-pin couplers. Subsequently, more locomotives were obtained from the Rogers and Schenectady locomotive works, and observation cars were also added to the trains.

The little railroad achieved immediate popularity. Volume of traffic increased rapidly, and extensions of the line followed. A branch named the Cairo Railroad was constructed from Cairo Junction north to the popular resort of Cairo. A spur was built to a shale pit near Cairo Junction from which thousands of carloads of shale were hauled down to the Kaaterskill Shale Brick Plant at Catskill.

However, passengers for mountain resorts were still obliged to de-train for carriages at Mountain House Road and Palenville stations. This disadvantage was overcome in 1892 by the construction and opening of the Otis Railway, an inclined road 7000 feet long, built right up the side of the mountain, ascending from Otis Junction at the base to Otis Summit, 2200 feet above the Hudson River. The latter station was only 300 feet from the Catskill Mountain House.

Cars were hauled by double steel cables passing over an enormous drum at the top. Ascending and descending cars moved simultaneously, passing each other on a loop switch midway from the terminals. Passengers—75 to 100 to a train—sat with their backs to the mountainside, looking eastward over a vast natural panorama. Flat cars carried baggage and freight.

Famous old No. 3, the ***Charles T. Van Santford***, dated from 1885 and was outshopped by Dickson. She saw service on the Cairo Railroad, a part of the CMR

The new railroads cut the trip to the Catskills from New York to the summit of the mountains to less than four hours. Thus, tourists leaving Grand Central Station on the New York Central's 4 p.m. express connected with Catskill Mountain train Number 15 and were landed at Otis Summit in three and three-quarter hours, including the ferry transfer from Greendale Station on the NYC to Catskill Landing.

Further enterprise built the Catskill & Tannersville Railway (known locally as the Huckleberry) from Otis Summit westward through Haines Falls to Tannersville. For this heavy gradient line of 5.5 miles, two 2-6-0 locomotives were purchased from one of the Denver & Rio Grande narrow gages. They were originally woodburners with driving wheels inside the frames. One of these antiques had to be scrapped and its boiler used to heat the Mountain House. But the Catskill Mountain Railway System was complete.

Year after year, it continued to prosper. Its management was efficient, its personnel courteous. No passenger was ever killed or seriously injured.

Then came the automobile to cast its blight upon the steamboats and the railroad. With the aid of convict labor, New York State built a concrete highway from Palenville up the Kaaterskill Clove to the mountain top. As the roar of gasoline motors rose louder in that sylvan retreat, traffic on the CMR declined. Once coal-black annual reports began to show a tinge of red. On April 30, 1917, the CMR passed under the control of the Hudson River Steamboat Co. In a futile attempt to keep the railroad alive, it was re-organized as the Catskill Mountain Railroad Corporation; but in 1918 the last mellow tones of the little locomotive's whistle echoed through the mountains.

The rolling stock was sold to distant narrow-gage roads in Mexico, South America and elsewhere. Rails and bridges —except for the first bridge at Catskill which has been retained for pedestrian use —were sold as scrap metal. And now, after three decades, trees and grass have obliterated the right-of-way, and only a distinct gash up the mountainside marks the roadbed of the Otis Railway.

No memories of the CMR can fail to include its "grand old man," John Leonard Driscoll. Few rails have been as versatile, for he engineered construction, served as superintendent and demonstrated genius as master mechanic. In its 36 years of operation, the Catskill Mountain Railway never had an accident or a single engine failure. On his 100th birthday in 1937, Driscoll's Masonic Lodge presented him with an engraved bell from Number 3, the *Charles T. Van Santford*. When the old railroader passed away at the age of 103, the engine bell was returned to the Masonic Temple in Catskill. Highly polished and mounted on a mahogany base, with a bronze tablet, it is a treasured possession. Its tone has a remarkable mellow quality.

With their polished brasswork and glistening paint, Driscoll's locomotives were a joy to behold. All bore the names of CMR officers. The engines and the clean wine-colored coaches they hauled were the admiration of this writer, who frequently rode the Catskill Mountian trains in his younger days.

The oldest surviving engineer of the CMR is Frank Ruf, still hale and hearty at the age of eighty. He worked for the line for 30 years, four as fireman and 26 on the righthand side of the cab. For most of this time, he handled the throttle of the Number 2, the *John T. Mann*. "I was wedded to that engine," he remarked in a recent talk with the writer. "I never had an accident in thirty years except once while switching; and than a pile of bricks rolled over the track and upset my engine.

"I crawled out without a scratch," he continued with a grin. "I had a young fellow firing for me who was keen to become an engineer. He crawled out rather slowly, I thought. 'Why the heck didn't you jump when you felt her going over?' I asked him. 'Well,' he replied, 'I was going to, but then I decided I'd better stick to her and get this new experience'!"

That's the famous Mountain House, at top left of picture. Ascending to it from Otis Junction via the elevated railroad is a carload of tourists. Note the passing switch midway to top and the spur track in center foreground

Out of the Car Shops:

New Plumage for the *Eagles*

MISSOURI PACIFIC bought its first streamliner nine years ago. A 6-car lightweight called the *Missouri River Eagle,* this train rattled off the miles between St. Louis, Kansas City and Omaha with enough speed and "foamy" comfort to attract more than double the patronage of its predecessor. Inaugurated March 10, 1940, in less than two years and eight months the speedster had paid off in net profit the initial investment of $1,137,727.

Good lighting, comfortable seats, plenty of leg room—the coach-rider's dream. Fluorescent lamps in luggage racks are individually controlled

Since then the MoP has needed no sales promotion to dramatize the revenue benefits of the aerodynamic blue-and-grays. During May, 1941, the *Delta Eagle* began hauling passengers between Tallulah, La. and Memphis, Tenn., 259 miles of unlikely country for heavy traffic. This *Eagle* took twice the time of the first to earn its cost, but was out of debt in '45. In June 1942 *Colorado Eagles* were sweeping cross-country between St. Louis and Denver, and only 290 days were needed to record a net gain of nearly $1½ million, their total cost. By this time warloads were booming. Yet like many other roads, the MoP had to couple its hopes to the production charts of America's carbuilders: Pullman-Standard, American Car & Foundry and the Budd Company.

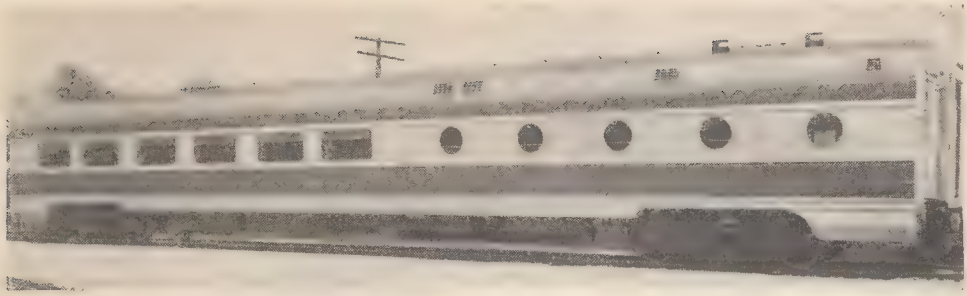
Courtesy Missouri Pacific

Last year all three fabricators got into the act, with $14 million in polished steel rolling from their assembly lines toward the MoP system. Missouri Pacific linked with the Texas & Pacific was racing the joint MKT-Frisco operations for a big slice of the Southwest's prosperous transportation industry. By August the *Texas Eagles* were combining MoP-T&P trackage and equipment to connect St. Louis with El Paso and San Antonio. Neither the old routes nor the old cars were good enough; time schedules were slashed by curve and grade reductions, while new

Eagle **equipment is as diversified as $14 million could make it: combination coaches and sleepers head the list with diners, diner-lounges, baggage-dormitories and RPOs following. Yet one design, one exterior color scheme and one set of interior color combinations are used. Each car has been conceived as part of a single train**

New sleeping cars offer no open berths. Most popular arrangement is the 14-and-4—14 roomettes and 4 bedrooms. ***Upper right:*** **Interior of double bedroom**

Food is a most important item. Several lounge-grill coaches (No. 870, ***above)*** **pass out off-hour snacks on short hops; regular diners serve 44 at one sitting, providing 6 tables-for-two in center section,** ***right***



Porthole windows generally indicate crew quarters or kitchens. The MoP-T&P *Eagle* pool counts 2 diners (No. 840, *top)* and 10 diner-lounges, plus 10 dormitory combinations. Dormitory-lounges carry 52 paying guests, house 3-tier bunks for 9 trainmen. *Below:* Baggage-dormitories care for diner's crew of 15 and still allow a 40-foot compartment for freight

Left: **Rear section of new divided coaches, streamlined version of Jim Crow cars. Plexiglass grille and door form necessary separation; seats, drapes and lounges—forward and behind—are identical**

Interior of ACF lounge-grill coach, serving area in foreground

coaches, sleepers, combination diners catered to the comfort-conscious.

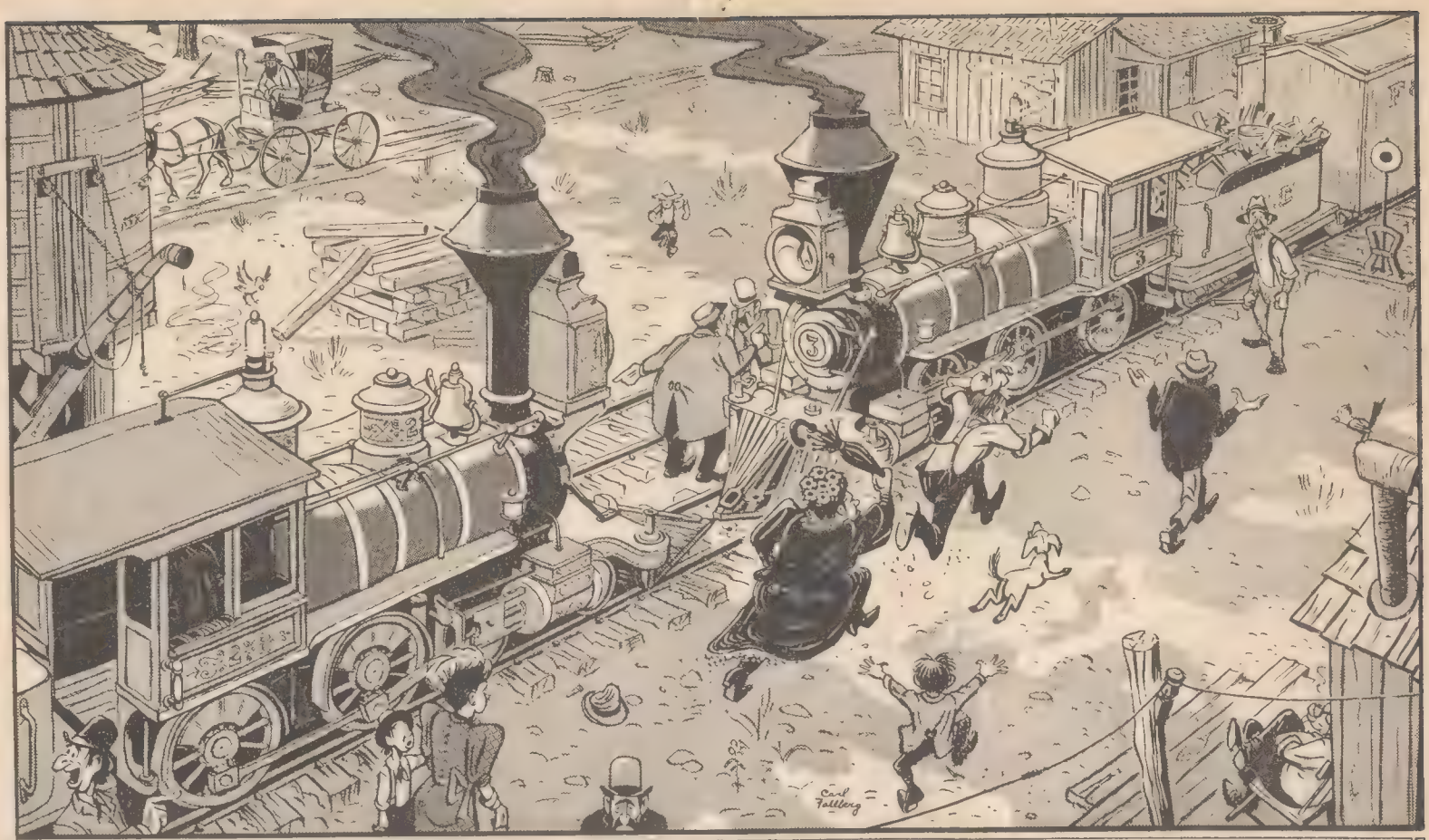
In all, Missouri Pacific ordered 134 cars: 69 from ACF, 47 from Pullman and 18 from Budd. Budd's order included three Planetarium cars—vista domes—for the *Colorado Eagles.* Several days before

the latter were placed in regular service, MoP ran an extra—the *Crippled Children's Planetarium Special.* Young polio victims were riding an MoP *Eagle* for the first, and perhaps last, time. We doubt that any road sponsored a prevue more appreciated, though the MoP confidently awaits the enthusiastic thousands who will ride the *Eagle* fleet in 1949.

Big news in a small way last June was prevue of *Colorado Eagle's* Planetarium dome coach: with 75 crippled youngsters the MoPac special toured St. Louis area for 2 hours. Visitors crowding the blister, *upper right,* or settled contentedly in deep cushioned seats, *below,* had but one suggestion: more—more domes, more trains, more balloons and ice cream. Several days later Denver-St. Louis travelers got an eyeful of new equipment.

At present *Texas Eagles* mention no glass-deck cars, but offer time savings of 2 to 9 hours

***Bottom:* Budd Company built 3 dome coaches for *Colorado Eagles,* first to operate in or out of St. Louis**



FIDDLETOWN & COPPEROPOLIS RY.

No. 6 Superiority of Passenger Trains is Established by Belle Murphy at Shingle Siding

by Carl Fallberg

On the Spot

DIAMOND-STACKED *8-wheeler,* the Canadian Pacific's No. 30, built in September, 1887, was recently put back into active service for a stellar role in the film entitled "Canadian Pacific." The old engine posed for the camera in the Banff district to show the building of the CPR through the Rockies. According to information we received from Frank Walliser, 236 24th Ave. N.W., Calgary, Alta., Canada, the *8-wheeler* was hauled "dead" from Montreal to Calgary but traveled under her own steam from there to Banff in about 2 hours, over a route she had often traversed around the turn of the century. She looked like a midget beside the CPR 5900s as she was checked over in the Calgary roundhouse, and her whistle lacked the full-throated blast of the modern behemoths. Nevertheless, she rode the rails proudly. She was fired by coal but her tender was piled with the fuel she had used as a wood-burner in the long ago.

At her throttle as she pulled out of Calgary sat Seldon W. Sutton, who later piloted her while the movie was being made, and then began taking his pension. Sutton, a veteran of the Calgary district, was born in Middlesex, Ontario, on August 11, 1883—the very day that the first CPR train steamed into Calgary. As a man of about 24 he fired a locomotive for Engr. William Puller, who had brought that first train to Calgary.

"I remember No. 30 from more than 40 years ago," he told a *Calgary Herald* reporter. "There were several small engines like her which ran out of Calgary. They couldn't get up the Big Hill from Field, B.C., to Lake Louise with more than 3 or 4 coaches. If our train was longer than that, we had to use another engine."

Mr. Sutton was given the special assignment to drive No. 30 for the movie filming because of his long service with the CPR. He started railroading at Calgary on March 15, 1903, and was promoted to the right-hand side of the cab in 1910. His fireman on the "movie run" was Leslie C. Ryder, 1418 11th Ave. E., Calgary.

* * *

TOUGH was the word used to describe the father of Dr. S. A. Allen. Our correspondent was born in Council Bluffs, Iowa, in 1879. "At that time," he writes, "Dad worked on what is now the Milwaukee Road. When I grew old enough, I would ride his caboose and listen open-mouthed to the tales I heard of link-and-pin railroading. More than once I saw my father wriggle from one brake-wheel to another on his belly because the ice on the catwalks was so dangerous. Yes, he was tough!

"It thrilled me to note the power of the engines to roll the long freights, to come crashing through on the main line as we waited in the hole for them. I'll never forget that midnight at 18th Street and Avenue A in Council Bluffs when the Illinois Central, which had been trying legally to gain the right to place a crossing over the Council Bluffs and Omaha streetcar lines, forced the issue. Lanterns and torches were lighted suddenly. A gang of about 100 men loomed out of the darkness, took a crossing frog from flatcars and quickly dropped it into a place that had been cut out for it. The whole job was completed in a few minutes. Then a train tried it out.

"I'd like to read an article about the Union Pacific transfer at Council Bluffs. This city was once a great change point of the West, where trains of many roads arrived and departed, where several ended their competing runs, and where there were fights for mail contracts. We boys used to watch those trains roar through town, whistles blasting, special flagmen

H. L. Kelso

Last of 19 engineers who handled Death Valley Scotty's Special on its 1905 record run, 81-year-old T. E. Gallagher claims seniority as a RAILROAD reader

on duty at all crossings, and steam, smoke and dust flying.

"Such a story should, of course, include 'The Dummy.' That was a string of boxcars, from which the ends had been removed, all coupled together so that Iowa farmers and town wagons could drive on and through the length of the train, which, when loaded, would take off to Iowa markets. The return of The Dummy really gave our gang a thrill. The engine, pulling the closed boxcars filled with wagons, horses and drivers, would have to get them running fast, cut herself off, and make a flying switch so as to move out of the way as the train passed. This permitted the wagons to be driven off. Sometimes they came up pretty hard against the end pile. Sometimes they eased up short and needed a push.

"In those days we fellows were given a lot of freedom. We walked tracks, watched tracklaying, rode blind-baggage, used pinch-bars to prove we could move loaded boxcars, and hung around the switch shanty in the evenings when the lights were brought out, and rode handcars and pushcars all over the yards. I have walked tracks on hot days and felt the reflected heat of the roadbeds. I have smelled the sulphur gas from wetted ashpits. I have helped to push a hand-operated turntable, and have followed engineers as they walked around their engines, touching interiors and mysterious places with long-necked oilcans.

"Many a time I watched an engineer climb up and look out the cab window to see the conductor coming up with orders. He would take the yellow tissues, read them, glance out the window again, see the highball, lean in, pull the whistle for two sharp screams, and start the great wall of straining steel in motion over clicking rail-joints. The sight filled us boys with wonder and admiration. Many a time I've stood, 'seeing her out of town.' I kept standing even when the sounds had ceased, still watching after the failing taillights had blinked out of sight.

"My wife and I like to take vacation trips by Pullman. We enjoy the luxurious travel. But my real fun comes from looking out the windows, boy fashion, to watch the passing rails and roadbed, timing the speed by watching and counting pole numbers, and wondering if the blue grass under that dripping water tower, just where the shade covers, would not be a swell place for sleeping. I get a lift when we blast through a small station and glimpse the changing semaphore arm—the arm protecting all of us aboard the train.

"I am sure that a lot of folks would like to read in *Railroad Magazine* about roadbed structure, the science of curves, wheels without flanges, why an engine stops on dead-center—people, I mean, who want these facts put in language easy to understand. Yes, there is much to tell in the romance and drama of the rails.

"And did you know of that little narrow-gage railroad which plied between Council Bluffs (Broadway and 9th Street) and Lake Manawa? It was about five miles long and ran only in summer. Undersized open cars were pulled by dwarf

steam engines with drivers, whistles, bells and smoke. In memory I can still hear the *click-click* of those tiny rails. Often I spent the last of my money taking the prettiest girls in the world on that ride."

* * *

ETHNE KENNEDY'S article, "Denver's Forgotten Pioneer" (Sept. '48), brings back boyhood memories to H. N. Barr, 1251 Sherman St. S.E., Grand Rapids, Mich., who writes:

"My father, P. F. Barr, was a locating and construction engineer. He spent 18 months in the Royal Gorge under A. A. Robinson, chief engineer of the Santa Fe, when that road made its gallant fight to beat the Rio Grande. He built the South Park Line into Leadville, Colo., also the line between Buena Vista and Gunnison via Alpine Pass.

"Mother, Sister and I spent several months at Garos while he was making location surveys. Later we lived at Haywood Springs, then moved to Nathrop so I could attend school. We went into that country via stagecoach and stayed at Chalk Creek Ranch, the property of Mr. Nathrop, who had built the town of that name at the junction of the South Park with the Rio Grande. I have a collection of about 100 old railroad passes issued to my father and later to myself, some of them over roads mentioned in Kennedy's article. They date from 1871. I'd like to hear from anyone interested in this collection."

* * *

VISTA DOMES are a hazard to railroad operation, in the opinion of a Midwestern operator and leverman whose name is not printed here because he says, "Maybe the boss would fire me if he saw this letter." Our correspondent goes on: "Railroad men talk about the dangers connected with Vista Domes, but the brass hats are deaf. For instance, what will happen to a Vista Dome car when a coal spout or water crane is dislocated or a small boy drops a dornik from an over-

Country Doctor

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The Pipe Mixture with the KINDLY disposition

Gentle . . . considerate . . . dependable . . . like the lovable old character from which it takes its name. A matchless blend of the world's most wonderful tobaccos for pipe smokers, young and old.

Slow-burning! So very satisfying and such wonderful flavor.

TRY IT TODAY...

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25 Pleasureful Pipefuls for 25¢

If your dealer does not have it—write Philip Morris & Co., Ltd., Inc., Dept. M26, 119 Fifth Avenue, New York 3, N. Y., enclosing 25c for full size package

British Combine

Test run for luxurious, gaily-painted Diesel-coaches designed for Peruvian Central is the Buntingford-St. Margaret's line, Herts, England

head bridge? Changing the subject, but still referring to modern hazards, what would happen on double-track CTC where there are no operators to flag down a fast freight with a hotbox 75 cars from either end? With dry packing, the blaze would be negligible, but the menace would not.

"You may not know it, but the average operator flags down well over 100 hotbox trains a year on heavily-traveled double track."

* * *

FREIGHT-TRAIN performance continues to set new records. Figures from the Association of American Railroads for the first half of 1948 show that our roads hauled an average load of 1153 tons per freight train during that period, a 7-ton increase over the previous high record for the year 1947. Back in 1929 the average was only 804 tons.

These gains were brought about by the use of larger and more modern freight locomotives and cars, and by more efficient operating methods such as improved devices for signaling and heavier loading of cars in longer trains. Latest available figures give the average freight train 53.7 cars. In 1947 the average was 52.9. However, average freight-train speed has not changed since it was stepped up in 1945.

* * *

ABANDONMENT of a 25-mile stretch between Morenci, Mich., and Berkey, O., is sought by the Ohio & Morenci in a petition to the Interstate Commerce Commission, reports Don Sywassink, 535 S. Winter St., Adrian, Mich. This pike is an outgrowth of the old Toledo & Western, an electric road. It has a branch switching line at Blissfield, Mich. The O&M has been operating for 15 years with a single Diesel-powered train which leaves Morenci in the morning daily except Sunday carrying freight, grocery orders and other items needed by farmers. The line employs seven full-time workers.

Another setback in Michigan rail service is the ICC's permission for the New York Central to discontinue train 326-327 between Jackson and Grand Rapids, leaving but two passenger trains between those points. Still another, according to

Stanley D. Crews, Lawrenceburg, Tenn., is abandonment by the Detroit, Caro & Sandusky of the 12-mile line between Sandusky and Peck. This freight-only road still operates 30 miles between Sandusky and Caro.

* * *

LANTERN department statement (Sept. '48, page 80) that certain Pennsy, Virginian and C&O high-capacity coal cars are not used in interchange service "is true only in a limited sense," writes Gustave W. Erhardt, 1343 Dawson St., Toledo, O., adding: "The Norfolk & Western uses 1750 high-side gondolas of 180,000 pounds capacity with 6-wheeled trucks in moving coal to lake ports.

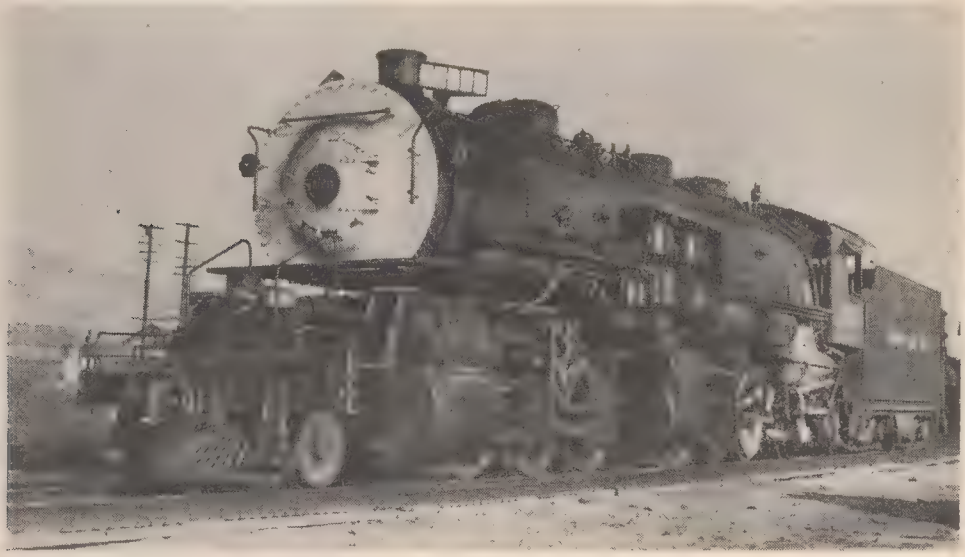
"The Virginian cars are employed in interchange service over the N&W and the C&O to the C&O docks at Presque Isle on Lake Erie at Toledo. They also move over the New York Central (Toledo & Ohio Central) from Deepwater Bridge, W. Va., to the Lake Front Dock & RR. Co. just east of the C&O's Presque Isle facilities. The same cars ride the N&W rails from Gilbert yard, W. Va., to Columbus, O., where they are handed over to the PRR at Grogan yard on the north side of Columbus for movement to the Pennsy's lake docks at Sandusky, O."

* * *

NEW YORK CENTRAL ads revealed to Sam Appleby, Box 205, Arcadia, Fla., that the road has numbered its new Diesel-electrics (General Motors, Electro-motive Division) in the 4200 series and some of its new Alco units in the 4200s.

Sam goes on: "This brings to mind the Seaboard's numbering system, which also includes GM Diesel 'A' units in the 4000 series and Alco 'A' units in the 4200s. The coincidence does not extend to horsepower rating, weight and so forth. A similar coincidence is the fact that the Boston & Maine and Seaboard road switchers, Alco-built, and the Norfolk Southern's road switchers, Baldwin-built, are all in the 1500 series. Can any reader add other roads to this list?

"Unusual Diesel combinations operate over the Seaboard's hilly Virginia Division between Hamlet, N. C., and Richmond, Va. One afternoon I saw two trains having a combination of one new GM 1500-hp. freight unit plus two new



H. L. Kelso

Two lone *Mallet* Compounds, ex-Verde Tunnel & Smelter Co. orphans on SP's mighty roster, are working out their term of service on the harbor drags from L. A. yards. In action above, No. 3931

The Railroad Evangelist

Take one quiet country road, add a semaphore and a depot and, anywhere, anytime, the result is one retired railroader's mainstem

Alco 1500 hp. units—*The Capital,* with units 4028, 4300, 4200, and *The Courier,* with units 4031, 4302, 4202, and 93 cars. *The Migrator* had five GM freight units, 4020, 4120, 4115, 4015, 4023, in a transfer of extra horsepower back to the division's south end. The same afternoon I saw still other freights with three GM units, two GM units, and a Baldwin 3000-hp. giant unit hauling 64 cars. Such sights afford quite a show for Diesel fans."

* * *

IDENTICAL TWINS with the same initials and many other similarities are Texas & Pacific pensioners; Tatum Lundy Downs and Thomas Linzie Downs, born June 13, 1882, at Taum, Texas. These fellows grew to age 30 before being separated. Tatum began working in the T&P shops at Marshall, Texas, in 1915. Shortly afterward his brother hired out on the same job there. The two looked so much alike that their bosses and fellow workers were constantly confused. Tatum became a painter, the other a machinist. In later years one of them acquired a gold tooth; that was about the only difference in their appearance.

Texas & Pacific Topics, writing up these twins, says: "Living next door to each other on Marshall's Texas Street for more than 30 years, the brothers often arrived home from work together to be greeted by their collective children—each has had two boys and two girls—who would often mistakenly rush into the arms of an uncle instead of their father's. Even in tragedy there has been a sameness. Each brother has lost one child."

Tatum retired June 19, 1945, and his brother two years later. Rarely has the railroad world seen two such identical twins.

* * *

MAILBOX with a semaphore and a miniature railroad station stands by the farmhouse of J. W. Harkey, Rte. 2, Matthews, N. C., a retired railroader and ex-member of Lodge 626, Brotherhood of Locomotive Firemen and Enginemen. His brother, Luther S. Harkey, editor and publisher of *The Railroad Evangelist,* Box 1478, Sanford, Fla., comments, "This mailbox shows you can get the man off the railroad but you can't get the railroad out of the man." J. W. Harkey's hobby is collecting old annual passes. He'd be grateful for any you care to send him.

* * *

GLOBE-TROTTERS have nothing on Fred S. Drumm, chief conductor of Division 676, at Lafayette, La., who retired last July 30th with a total of 1,884,500 miles behind him. Conductor Drumm, who reached the grand old age of 70 exactly 16 days before making his last run, estimates that with present working hours what they are, he'd have to labor well past the century mark to equal this mileage. Back in 1903, when he started in as brake-

man on the Southern Pacific, it was not uncommon for the traincrew on an 18-hour run to turn right around for the return trip.

Fred first went railroading at the age of 15 on the old ML&T (now T&NO) as a messenger boy and worked himself up to be clerk and straw boss. "I believe," he says, "that while working on the Morgan Wharf in 1898 I checked the first shipload of cotton to Kobe and Yokohama, Japan, and again in 1899 checked the first shipment of Texas beef to South Africa during the Boer War.

"In the latter part of 1899 I left the ML&T and became a railway postal clerk, substituting on every railroad out of New Orleans and on the Mississippi River steamboats. In those days, there was service between Baton Rouge, La., and Helena, Ark. During the time I served on a mailcar running between New Orleans and Lafayette, the barge system was inaugurated between Harahan and Avondale. I had the pleasure of being on the first passenger train to cross the Mississippi by barge.

"I went back to the T&NO (Southern Pacific) in 1903, making my first trial run on September 19th, 137th down on the seniority list. Promotion to freight conductor came in 1911, and to passenger conductor in 1921.

Now even juicefans will admit that a streetcar can be converted into a stink buggy. Yeah, those are fish in the hamper—and the place is rationed Tokyo caught with a transport shortage

"Down over the years I had few accidents, and none of them bad. At Bayou Sales, La., while setting out a car, I got my fingernail pulled off and the end of my finger mashed. Again in 1909, I lost my lantern and hat and smashed my hand on the wheel of the brakestaff while stepping from the top of a boxcar onto a tank. Later, at Schriever, La., I pulled a muscle in my right leg while catching the 20th car back from the engine. And once, near Morgan City, a hobo hit me a glancing blow on the cheek, knocking my glasses off. No real damage was done, however.

"It was different with some of my crewmates. One winter on an outlying cane run, I had a boomer brakeman who tried

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HEADACHES
NEURALGIA

G. D. Glazebrook, Kimball, Nebr.

Contesting the claim of Marshall Pass, Colo., to be the smallest U. S. postoffice (population) is Wheeler Springs, Calif., with this midget-sized building

to adjust a coupling with his foot while holding a stalk of cane in one hand and a knife in the other. When I got him out, his foot was hanging by a piece of flesh. He used the knife to cut his foot off; then stopped to ask the cane-weigher (a lady) to wait until after sun-down to bury his foot before letting us put him aboard. Peroxide on his wound staunched the blood a little, and he was completely conscious when we arrived at Franklin. At least 500 people were gathered around the ambulance waiting for him at the station. As the orderlies carried him through the crowd, he yelled out, 'Did you folks never see a man with his foot cut off before?'

"Yes, I've been lucky. I was never out of the service for a minute; never went before the superintendent but one time and then was exonerated; never missed a watch inspection; never delayed a train on account of going back to sleep; and seldom, if ever, missed a call. I never had a wreck in which any of my crew was killed and never had a passenger train wreck. I'd like to compare my record with that of other conductors in the U.S.

"As to the mileage I made in my lifetime—it's worked out like this: 45 years' service at 100 miles per day is 1,642,500 miles; 6 years as caller and clerk is uncounted; 4 years as railroad postal clerk at 100 miles per day equals 146,000 miles; and 43 trips around the U.S., Mexico and Canada at 2,000 miles per trip is another 86,000 miles; total, 1,884,500."

* * *

MEET QUEENIE, mascot of the crew of Rock Island switch engine No. 761 in the Armourdale yards. Landon Laird devoted a column to this raildog in *The Kansas City Times*. Queenie attached herself to the crew one cold, rainy, October day in 1946 when George L. Glaser, switchman, saw her carry a newborn pup into a shanty he was occupying. Queenie laid the pup beside the stove. Glaser found the rest of the litter of six pups beneath a coal shed and made room for them near the stove.

At that time the crew working with Engine 761 consisted of E. R. White, hogger; William Tauber, tallowpot; and Charles M. Hart, Lansing Bailey and Glaser, snakes. All five grew fond of Queenie. They provided food and saw to it that her pups were adopted into good homes. Queenie became very much attached to the crew. Daily she trotted beside No. 761 on countless trips around the yards. When she grew tired, the men would lift her into the cab.

Eventually Glaser took Queenie to his home, 1139 Custer Ave., Kansas City, Kan. On the dot of 3:45 a.m. every morn-

ing, she was ready to accompany him to work and at 11:55 p.m. she indicated that it was time to go home again. She knew when a full day's work of engine-chasing and cab-riding was completed. Last summer the switchman stopped taking Queenie on his trips because she was expecting a "blessed event." Latest bulletin from the Glaser home says the raildog is busy training four new railpups, George, Elmer, Oscar and Lady. This item was sent in by Richard Craig, traveling freight agent, Kansas City Southern and Louisiana & Arkansas.

* * *

BISHOPS employed by railroad companies are not uncommon in the West, reports H. L. Beebe, Illinois Central engineer, 103 S. First St., Champaign, Ill., commenting on an Aug. '48 *Spot* item. He writes: "During the time I worked for the Union Pacific at Green River, Wyo., from 1927 to '41, I knew three Mormon bishops on the UP payroll. They were John J. Hornback of Ogden, Utah, locomotive engineer; Clifford G. Eyre, presiding elder (same as a bishop), Rawlins, Wyo., locomotive engineer; and Albert C. Reinsch, Green River, switchman. I often worked with Bishop Reinsch when I was firing a switch engine.

"Mormon bishops are not paid by the church; they must do other work for a living. The only people paid by the church are those devoting all their time to religious duties, such as those employed in the church offices at Salt Lake City. All of the Mormons' general authorities, including President George A. Smith, are active business men."

* * *

MEMORIES of 50 years ago swept over H. L. Carpenter, Rutherfordton, N. C., when he engaged in conversation recently with an armed guard named Peden who was watching prisoners at work on a road-repair job. Our correspondent was surprised to learn that Peden was the son of an old friend of his, Engineer Peden of the now-abandoned Maxton, Alma & Rowland, whom he had not seen for half a century. The MA&R had been owned by Wilkerson & Fore and managed by H. S. Lathrop. It hauled mostly forest products, with two locomotives, the *Little Rock* and the *Bladen*.

"I was 16 when I began working for the MA&R as telegrapher in 1888," Mr. Carpenter adds. "Knowing how much I loved engines, Engineer Peden sometimes turned his locomotive over to me at Alma, N. C., and permitted me to shift cars. It was a thrill which many boys envied."

* * *

A CONDUCTOR on the New Haven, Dante L. Del Vecchio, was going through his New York-bound train the

U. S. Navy

Sailors from the USS *Valley Forge* admire a picturesque form of land transportation in the Cable Railway station on Floyen Mountain. It's a long drop down to Bergen, Norway, 1050 feet below

other morning, collecting tickets from passengers who had gotten on at South Norwalk, Conn. One man casually handed over a twice-punched ticket to New York, a ticket purchased at Ridgefield, Conn., on May 11, 1917. The punches indicated that the ticket-holder had traveled from Ridgefield to Branchville, Conn., over a line that no longer exists, and then to South Norwalk.

Pressed for an explanation, he explained that "something had happened" back in 1917 to interrupt his trip to Grand Central Terminal. Condr. Del Vecchio failed to ask the unusual passenger his name. Now the New Haven management is seeking the man who required more than 31 years to complete a 60-mile trip. If and when he presents himself, he will be given a large iced cake by way of celebration. Plenty of folks are curious to learn why and how he kept that ticket so long.

* * *

NORFOLK & WESTERN has won, for the fourth time, the E.H. Harriman Memorial gold medal for outstanding safety record among Class 1 roads. The American Museum of Safety bestows it annually. The award was established in 1913 by the widow of the rail magnate.

N&W points proudly to its employe casualty rate for the past decade—only 4.25 per million man-hours worked. This figure is 60 percent better than the national average. During the same decade N&W carried nearly 30 million passengers a total of more than four billion passenger-miles without a single passenger fatality in a train accident.

* * *

A HUGE CAKE, its icing suitably inscribed, was presented the other day by Condr. E. D. Friend to his enginemen, John L. Sefton, when the old New York Central runner retired after 49 years' service. Fellow engineers gave Mr. Sefton a fishing rod and his wife a floral bouquet at the end of his last run from Kankakee to Indianapolis with *The Cincinnati Special.* The pensioner is one of seven railroading brothers employed by the Central. There are also three nephews and a grand-nephew on the NYC payroll.

Of the brothers, H. W. Sefton, supervisor of locomotive and fuel performance, was pensioned in '41; D. C. served as a fuel inspector until he entered the armed forces in World War II; William H. is an engineman, Indiana Division; Edward, an engineman, was killed in an accident in '26; B. F. is a yard conductor and Earl F. a machinist helper, both at the Cincinnati Union Terminal. The three nephews are enginemen; the grand-nephew is a fireman.

* * *

NEWEST railroad in the United States, according to Walter Thayer, Great Northern trackman, Box 1588, Chelan, Wash., is the 52-mile line known as "The Flying Eagle," completed recently from Eagle Mountain iron mine to a Salton Sea connection with the Southern Pacific This road was built in 11 months by Henry Kaiser at a cost of about $3,800,000. He hauls iron ore over it and the SP to his steel mill at Fontana, Calif.

* * *

STEALING of the locomotive *General* by the Andrews raiders in 1862 is still being hailed as a daring, romantic adventure; but out in California Joe Harrah has only rage and contempt for the unknown man or men who pilfered the two locomotives he had been using for redwood logging at Fort Bragg. Charles S. Ryan of Venice, Calif., reports that the logging engines were not only stolen but were cut up with an acetylene torch, carted away and probably sold as scrap. The *General* was saved from such an ignominious fate.

* * *

WRECK information is wanted by Harry B. Chase, Jr., 18 Beech St., Mansfield, Mass. A friend of his found, in a Foxboro, Mass., junk shop, an old

brass pipe fitting with a needle valve, evidently part of a locomotive boiler feed, to which was attached a tag reading:

"From the wreck of the West Shore which occurred at Canajoharie on the morning of Feb. 21, 1885. Three engines attached to a passenger express collided with an engine attached to a freight train standing in the yard. Two lives lost. Property destroyed estimated at $100,000."

Mr. Chase is not sure of the date nor of the town's name, as the tag is badly worn. Who can supply details?

* * *

FIRST family reunion in 20 years occurred the other day when five brothers—Edward, Raymond, Stanley, John and Joseph Callender—all of whom are or have been Big Four employes, joined their mother, Mrs. J. D. Murphy of Indianapolis, at John's home. Not since 1928 had all five brothers and their mother been together. John and Joseph are twins.

* * *

GRAND-DADDY of all railroad trackage agreements in force today in the United States was made 100 years ago between the New York & New Haven and the New York & Harlem for the joint use of tracks between Williams Bridge and New York City. The present roads involved in this deal are the New Haven and the New York Central.

ENGLAND HEARD FROM. Isaac Kobham, 206 Greenfields Estate, Tunstall, Stoke-on-Trent, England reports that the British Railways' only mainline big Diesel, No. 10,000, after running for months between St. Powers and Derby, is in the shops for repairs. Her place will be taken by a new engine, No. 10,001. He adds that soon the two Diesels, coupled, will haul mainline expresses between Euston, London, and Glasgow.

* * *

LAST STOP is the Reader's Choice Coupon *(page 145)*, which guides your editorial crew in selecting material for future issues of *Railroad Magazine.*

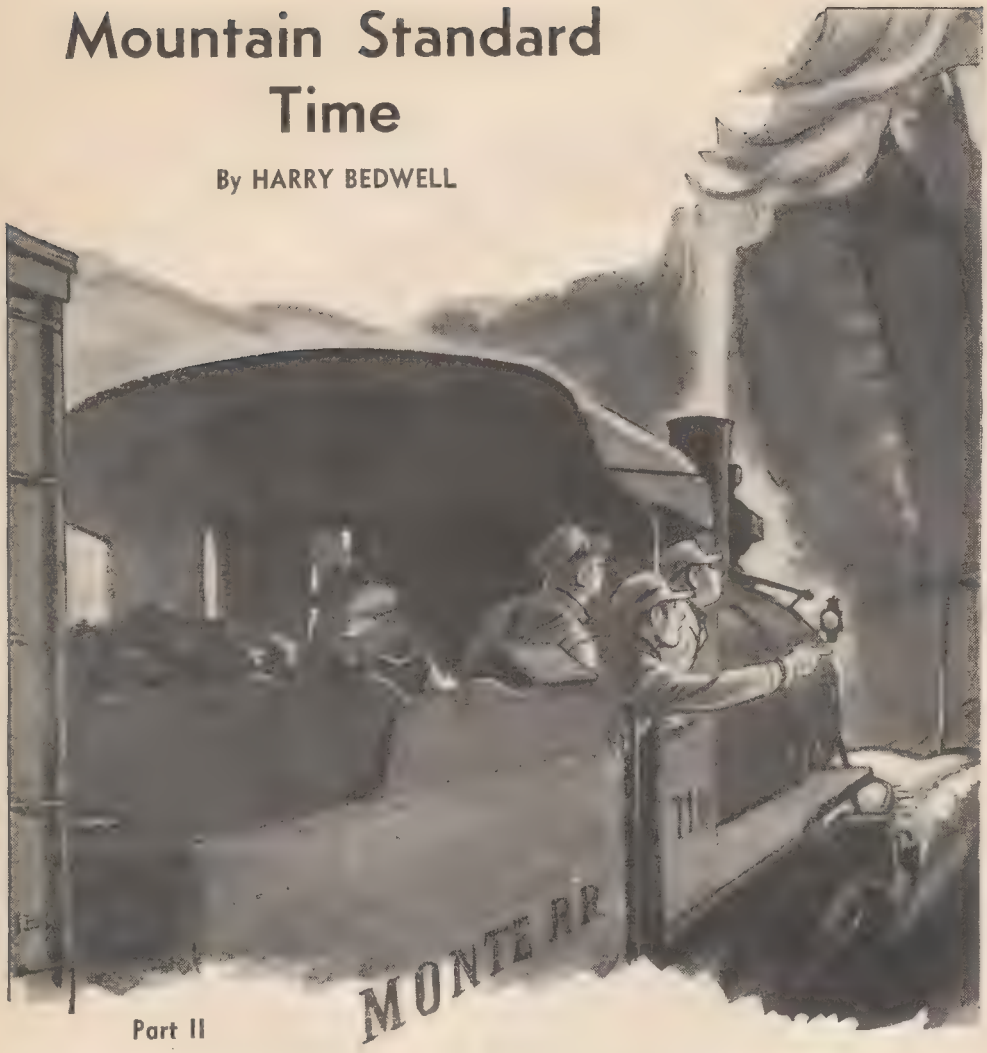
Some readers use the coupon. Others prefer not to clip the magazine; they send home-made coupons, postcards or letters. Regardless of how votes are written, all count the same. Results of balloting on the December issue show as follows:

1. Rolling the Citrus Gold, *Dellinger*
2. Why We're Going Diesel, *Hall*
3. High Water on Great Salt Lake, *Goodman*
4. Dynamite Kelly, *Athanas*
5. Mountain Railroading, *King*
6. Light of the Lantern
7. I Stopped the *White Train, McMasters*
9. Shell Siding, *Hinds*
10. The Old Buckhorn Flat Road, *Johnson*

Most popular photos: pages 18-19, 67

Mountain Standard Time

By HARRY BEDWELL



Part II

THEY sawed the hay train, an ore train and Number 72—mixed merchandise—out of the jam at Coaloil, and the three trains continued on their circuitous ways over the muleshoe curves and switchbacks of the Monte Short Line.

Clinker Ward, the trainmaster riding Number 72, had been downright punitive about the whole affair. He had ordered a hearing in his office at Silverton on the morrow, and Mel Hatch could see that he had a hatful of brownies he meant to slap on.

But it was the other way around with Dodd, the skipper of the 72. He had a grievance. He was sore and short-tempered and he snapped at the Clinker when they'd settled in the caboose.

"You make Mel Hatch, my parlor man, ride the smoky end," he raved, "so he can show the new brakeman the road. That leaves me to close the switches when we pull out, and flag when we stop on the maintrack. I got promoted out of that fifteen years ago."

The Clinker grunted moodily.

"Besides which," the skipper burned, "Hank Wheeler, that new man, is a boom-

They took the curve along the lip of the ridge. Down below, the special pulled out onto maintrack . . .

er from all over the darned map. Mel Hatch ain't scarcely dry behind the ears yet, and he couldn't show Hank nothin'!"

The Clinker muttered irritably behind his granite facade.

"Mel Hatch!" he moaned. "Any red-headed stinger'll jinx your railroad, but that sorreltop draws trouble like a very powerful magnet. I wish he'd fall in the river and more than half drown."

Number 72 clanked and snorted through the dark, her headlight probing precipitate walls and breathless depths.

Up front, on the smoky end, in the cab of the 710, Engineer Pete Pederson bounced gently on his seatbox and beamed and worked his empty jaws. Pete was a confirmed optimist, and the hindend collision and the saw he'd just encountered, hadn't darkened his blithe spirits. Nothing had gone on the ground, all trains were moving again and the world was clothed in all its brighter aspects.

Hank Wheeler, the new carhand, had his ramshackle length draped disconsolately over the fireman's seat. He'd joined the birds just prior to the collision and his resultant injuries still pained him. He followed the wanderings of the headlight's beam without a trace of enthusiasm. In fact, the more he saw of the Monte, the better he liked it everywhere else.

Mel Hatch stood in the deck beside the hogger, and brooded over the wager with Pete which Hank wouldn't let him collect. With that four-bits he could have purchased a small amount of sustenance at the next stop. Now, with not a thin dime between them, he and Hank faced immediate starvation. These altitudes made you hungry six times a day.

He tried to figure an approach to put the bite on Pete, a plea that would break him down and cause him to feed the destitute. Pete owned a ranch, with cows and chickens, which his wife worked and tended, and you'd think a feller with such an amount of grub at hand would be liberal. He opened his mouth on an urgent proposition, but Hank silenced him with a scowl. Hank was afraid Pete would straighten out a muleshoe if his mind was taken off his engine.

Marty Shut, the ashcat, raked the fire and covered it with great shovelfuls of coal. He too felt the pangs of hunger, but for him grub was in sight. He lifted up his voice and sang.

Mel took a long, dry swallow on the vast emptiness inside him.

They took siding at Visalia. Yellow light from the restaurant windows splashed the sidewalk across the way. Marty Shut lit out on the run, and the beanery door banged as it took him in. Dodd and the Clinker came up from the caboose and followed him inside. Pete began prodding the packing boxes of the 710 with the long spout of his oil can.

Hank got Mel into a huddle prior to inspecting the train.

"You say you got some slight signs of hunger?" he demanded.

"I'm holler clean down to my toes," Mel declared.

Hank's long face contorted with thought. "How does our Clinker stand on the matter of carrying tramps on his freight trains?" he asked cautiously.

"They're quite a few driftin' miners that ride our drags," Mel answered, "and I ain't seen any of the stingers toss 'em off their trains—unless it was because they didn't have the required four-bits, which is due the trainman that discovers them. As a fact," he lamented, "I've been keepin' an eye out for some bums we might collect from, but there don't seem none ridin' our schedule."

"You lack the keen eye of experience," Hank chided. "And the nose for vagrants besides. There've been signs and smells. You take the other side of the train, and when we come to that D&RGW boxcar about the middle, I'll cross over to your side and show you something."

They took opposite sides and moved back toward the caboose, feeling for incipient hotboxes and peering under the cars for broken gear. Halfway, Hank paused and sniffed, then eased himself up onto the drawheads between two boxcars. He examined the little door high up on the end of one of them. The seal was broken and the door was open two inches.

Hank sniffed again, and came down beside Mel.

"Stand by to render aid and assistance," he ordered.

He broke the seal on the big side door and shoved it open. They held up their lanterns.

The car was loaded with sacked grain, four high at the doorway. Leaning against them, two men lounged at ease, smoking.

"Well, boys," Mel greeted them jubilantly, "how far do you think you're goin'?"

"To Silverton," said the big one, "and 'tis a grand ride we're havin', except now and then mebby an earthquake hits us. Would you mind," he asked politely, "tellin' a body, was that last disruption a boulder in the midst of the track, or did we miss a curve and run into the mountain itself?"

"That ain't the p'int," Mel said firmly.

"The question is, how much dough you boys got?"

"Nary a cent—or would we be ridin' a wanderin' old sidewinder like this?" the thin one complained. "It scarcely beats walkin'. We go to Silverton to work in the mines because we are broke, and for no other reason. But mebby when we return with our savings—"

"That," Mel interrupted, "will cost you one buck apiece."

"A dollar, now!" The big one left his mouth open.

"At this moment," Mel confirmed him. "The trainmaster's aboard us, and he'd unload you at any price if he caught you. All I got to do is raise a shout, and he'd call the town bulls and soak you in the jailhouse. So let's close this transaction before he comes along."

"'Tis an exorbitant price," the thin one cried, "and beyond all reason. 'Tis cheaper to walk."

"A buck apiece," Mel cut him down, "or the jailhouse."

They knew an ultimatum when they heard it. Reluctantly, indignantly, they dug up a silver dollar apiece.

A faint sound had been floating near the edge of Mel's ears. He identified it now as a series of ragged snorts. "Anybody else in there?"

"As you can hear," the big one sulked, "there is."

"Wake him up," Mel ordered, "and tell him his fare is now due."

A crafty gleam from the eye of the thin one glinted in the lantern light

"Wake him, he says," he murmured. "The man is a stranger to us, and not well disposed at all. He cannot even speak the language, but he has indicated on one or two occasions that he does not like to be disturbed. Myself, I warn again it," he added with the trace of a taunt.

MEL'S sudden financial success had made him reckless. He vaulted to the doorway in a quick bounce. The inert figure stretched out by the opposite wall made only an indistinct shadow, and he could not judge the man's proportions Mel nudged him in the ribs with the blunt toe of his boot.

The man kicked out with both feet. He sat up at the same time, as if a spring had released him in all directions at once. Those feet were enormous, and one of them caught Mel's lantern in a sideswipe that sent it spinning through the doorway

The man stood up, unfolding into a huge shape that towered like a water tank. Mouthing harsh foreign gutterals, he reached for Mel with a hand as big as a Number 2 scoop.

Mel had lost his lantern at the wrong end of the battle. He ducked the clawing hand desperately, stumbled on the soft footing of the sacked grain and felt his out-sized watch, worn in the bib pocket of his overalls, thump him in the ribs.

The blow flashed him one of those brilliant inspirations that sometimes worked, but often didn't. If that big watch, unaided, could punish him so severely with-

New! ANTIPHLOGISTINE RUB A-535

New fast-action Antiphlogistine Rub A-535 starts relieving discomforts of chest colds and muscular aches and pains the moment it is rubbed in . . . and it rubs in fast. Almost at once you feel warm, comforting relief as the pain-relieving medications take hold.

In a national survey, 8 out of 10 families wrote that Rub A-535 was better than any rubs, liniments or balms formerly used. Greaseless, won't stain clothes.

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out intent, it ought to cause important damage to an antagonist.

He yanked the chain from its catch in a button hole, and whirled the watch around his head at the end of the chain. He swung, and the watch made contact with the giant's bobbing head. The clink it made sounded like metal striking solid concrete.

The man stood still. His hands dropped listlessly and he loosened somewhat at the joints. He rubbed his nose and even seemed to blink his eyes sleepily.

Mel became impatient at this lack of definite response. He took a shorter hold on the chain and a firmer stance on the sacked grain. This time he struck from straight back over his shoulder, and the watch clinked louder. The man's joints gave way. He sagged and folded, and slowly nestled down with both hands under one cheek.

"When that ape comes to," Mel instructed the others, "tell him I'll be back for my dough, and he'd better have it ready for me."

He dropped to the ground, slid the door shut and adjusted the seal. He held the watch to an ear, listening hopefully. The busy sound from within satisfied him.

Hank handed him his lantern, with an air of awe. "You take that ticker, by and large," he flattered, "and you might say she's a handy piece of equipment."

"A very competent regulator," Mel boasted.

They completed their train inspection and crossed to the restaurant. Dodd and the Clinker had downed their meal and gone back to the crummy; and Marty Shut had returned to his engine.

Pete was at the counter, being served a beefsteak about half as big as he was. Mel eyed it critically.

"You got one about half again as big," he told the waitress, "and it'll do me for a starter."

Pete fitted his store teeth, paused and put a speculative eye on Hank.

"That engine of mine," he brooded. "The 710. She is a nice old girl, but they tell me they make them bigger now."

He snared a piece of meat and snapped it and chased it around his mouth with his tongue. He cornered the fugitive and clamped down.

"On the Great Northern, they tell me," he said between set store teeth. He chewed desperately.

Pete's entire railroad career had been spent on the smoky end of Monte trains. He listened, avid and incredulous, to the accounts the boomers brought in of how the locomotives on the big raillines had grown in size and power. Some day he'd go and see for himself.

"A feller told me the engines on the Great Northern was so big," he paused to marvel, "that you had to look twice to see the length of the boiler. Did you boys ever work on one that big?"

"Haw!" said Hank impatiently. "They've got engines down there on the Espee in Texas that're so big, three revolutions of the drivers takes you from one payday to the next."

Pete recessed his feud with the steer meat and deliberated. He leaned a cheek on his claw-like hand and pondered. His narrow forehead corrugated and his wash-blue eyes drew back under their brows. He sat very still.

The steaks and spuds sizzled, sending out good, warm odors. The fire purred softly as the cook stoked his range with coal. His round, pink face hung sidewise as he listened intently to this tall talk of life beyond the High Divide.

The waitress leaned smooth arms on the counter. Her brooding eyes drifted across Mel's face, then moved on to some far yonder past the line of saw-toothed peaks. Her face was warm and brown with a tinge of scarlet coming through.

Her slow, faraway look sent Mel's thoughts flitting over leagues of crisp starlight. The sunshine was like high noon all day long, down along the border, and gossip of the pilgrims had it that the *senoritas* were gracious and amiable and very good to look upon. Fandangos and fiestas; and the pulse of life was slow and ardent.

Right now, the boomers would be drift-

ing in to a boisterous reunion, working off the extra board, riding the thundering hotshots out of the southlands, rolling the green stuff to the cold weather markets.

Yeah, they couldn't stop you from dreaming, but the way his luck was running it would be many a long, chill winter before he'd see that promised land.

Pete finished his meal in a daze, and wandered back to his engine, mumbling intermittently to himself.

When Mel paid up, the girl said, "It's going to be the coldest winter." She smiled again, shyly. "The squirrels have stored twice as many nuts, Joe says." Her eyes drifted across his face and away to some enchanted spot she seemed to seek out, the way he sought the border country. "It would be nice to live in the sunshine all winter," she murmured.

"Some do," Mel said. "But most don't get the chance," he added gloomily.

THEY hauled out of the siding and rolled down a starlit valley. Pete mumbled to himself and ran his engine from a distant corner of his mind, while the rest of it was occupied with gigantic locomotives. He'd have run a red board at Copper if Mel hadn't pulled him down, and he'd have held the maintrack at Soonover against two more ore trains if Hank hadn't yelled his head off and stopped him and headed him in.

Hank was very unhappy over these slap-happy operations.

"Tellin' him bedtime stories, like I did," he complained darkly, "has got him all jumbled up in his mind. He don't know whether he's afoot or horseback." He gave Mel a withering look. "You said this was a rattletrap railroad," he smoldered, "but you didn't warn me it was run by lunatics."

The velvet depths of the sky hardened slowly into a metallic gray, brittle as glass. The peaks crowding up among the fading stars were edged with a faint glow. Dawn wasn't far off.

They came to Durban, and switched for 20 minutes. From here the line swooped in long, twisting spirals into the terminal yard at Silverton, far below. They got more train orders.

"The brass pounder," Dodd explained to Pete, pointing out one of the orders, "says that this here Extra 912, to which the dispatcher has given right over all trains, is the general manager's special. You'd better stay out of his way, or he'll nail your hide to the roundhouse wall."

Mel brightened. "Well, what do you know!" he cried. "The old G. M. himself is again touring his railroad."

This might amount to something. If they arrived in Silverton before the special left, he'd have an opportunity to see the Old Man before the Clinker got to him with a wild tale about Mel causing hazard to life and property. He'd pass the time of day and one way or another jog his memory of that time he'd put a red lantern in the G. M.'s face when he was at the throttle of his own special and heading at high speed into a collision. That way he ought to forestall any snide attempts the Clinker had in mind to have him run off the Monte.

"Yes, sir," he chortled, "I'll sure be glad to see him, and I know it'll tickle him." Then, looking at the Clinker, he muttered darkly, "I want to shake him by the hand and mebby say a word or two about how his railroad is bein' run behind his back."

"Somebody ought to tell him," the Clinker glowered, "but it'd better not be you."

Pete stared fixedly at the running order. "It don't say here it's the general manager's special," he remonstrated.

"Of course it don't," the skipper blew up. "It never does. But the op says so, and he knows."

Pete sighed gently.

"Look!" the skipper smoldered. "The G. M.'s schedule begins right here, where he leaves Silverton at 7:40. Do you think you can make it clean in to town for him?"

"Mebby," Pete figured genially. "It's downhill all the way."

"You'd better be sure of it," the Clinker warned. "If you see you can't clear him by ten minutes in the yard, you hole up

at one of the blind sidings this side. Don't get in the Old Man's way and delay him, or we'll all be in trouble."

Pete stuffed the orders in his pocket and climbed into the cab.

The rails snaked along a ridge, then dipped into the first long swoop of downgrade, and the 72's speed picked up abruptly. Hank closed his eyes and hoped fervently for the best.

Pete took out the wad of orders he'd accumulated since he left Gloria. He'd learned to distrust train orders. They were deceptive. Things like this one that said Number 72 wait at Kickapoo till 12:15. Hell, they hadn't reached Kickapoo till 1:05. Those dispatchers sat in the easy seat and thought up orders just to fool you. And they changed their minds so quick and often you never knew where you stood.

Hank opened his eyes as the 710 leaned out over an abrupt declivity.

"You'd better tighten them brakes somewhat," he advised in an anguished shout. "This is just like fallin' down stairs."

Pete put a preoccupied shot of air under his train and continued his studies with growing skepticism. Like this one here: Third 81 has right over Number 72 Silverton to Absolute. And then three orders later, the two trains are meeting at Graybar. He glowered at the tissues till he was seeing in circles. He gave it up and handed the orders to Mel.

"Your watch runs like the dispatcher's," he pointed out. "So you better read the orders and tell me when to head-in."

Mel took the orders listlessly—and had another bright inspiration. This might be a break. Now could he maneuver Number 72 into terminal before that 7:40 leaving time of the special? He read the orders rapidly, discarding the ones not now in effect. He looked at his watch.

"This here's 53 that's comin' against us," he calculated. "Pete," he fired up, "we got time to make Quartzsite siding for that one, if you let her out a little!"

Pete let her out a little more. Hank closed his eyes again and moaned.

They'd be on short time sneaking into the clear at Quartzsite, but you had to cut corners to get where you were going in the time available. Anyhow, Number 53 likely wasn't right on her schedule.

Seventy-two was still rolling briskly, coming up to the switchstand at Quartzsite. A good thing Hank had gone forward and was leaning out from the pilot like a pointer dog, ready to jump and run. He had to unlimber his best double-jointed sprint to get to the stand ahead of the pony trucks, and open it before Pete over-ran the switch. The 710 swerved over the points and they scooted down the siding.

But the hindend hadn't cleared before Number 53 slammed out of a cut, almost on top of them. And in the uncertain dawn light, her engineer didn't see them at once. They shouldn't, by his orders, have been there at all, and he wasn't alert. He kept coming without reducing speed till he was almost opposite the 710. Then he put a shot of air under his train, figuring to check her enough to miss Number 72's caboose by about six inches.

Pete widened his throttle, trying to whip his hindend into the clear before Number 53's engine plowed into it. Skipper Dodd hung out from the rear step of his crummy, shouting his livid opinion of the whole affair, and prepared to unload if 53's engine got to the switch first. After the crummy cleared on the siding, he found that he had four seconds in which to drop off and close the switch. He made it, but that didn't tickle him as it should have.

The crews of both trains gesticulated and yelled insults at one another in passing. Hank mopped beaded sweat from his brow. "What a hell of a way to run a railroad!" he reiterated with disgust.

Mel glanced at his watch. "Hey!" he cried. "That hogger got here seven minutes before he was due. What's he think this is—his own private highline?"

Hank said darkly, "They ain't all learned yet that you've got the only standard time there is on this railroad. They ought to put a bulletin out on it."

"It'd been that hogger's fault," Mel maintained stubbornly, "if he'd smashed us up."

"The big fault," Hank complained, "is that they ever built this goat path in the first place. All I ask is to get into terminal, alive and well. From then on the Monte's got to get along as best it can without me."

In the back of his mind, Mel had been hoping that Hank would stick around till things cleared up a little. His luck had to be good sometime, and if it made a sudden switch for the better and Hank was minded, they might yet drift southward out of the blizzards. But Hank's disgusted declaration showed he was hightailing it out of the mountains within a matter of hours, leaving Mel to his chilling fate. The best he could do now was make it in to Silverton in time to see the Old Man and protect his job on the Monte.

THEY headed out and began to roll. Mel made some close calculations. "Better push her a little harder," he encouraged Pete. "We don't want to lay out the G. M. while we get in the clear. If you boost it a little, we'll make it."

Pete beamed and gave an obliging tug at the throttle.

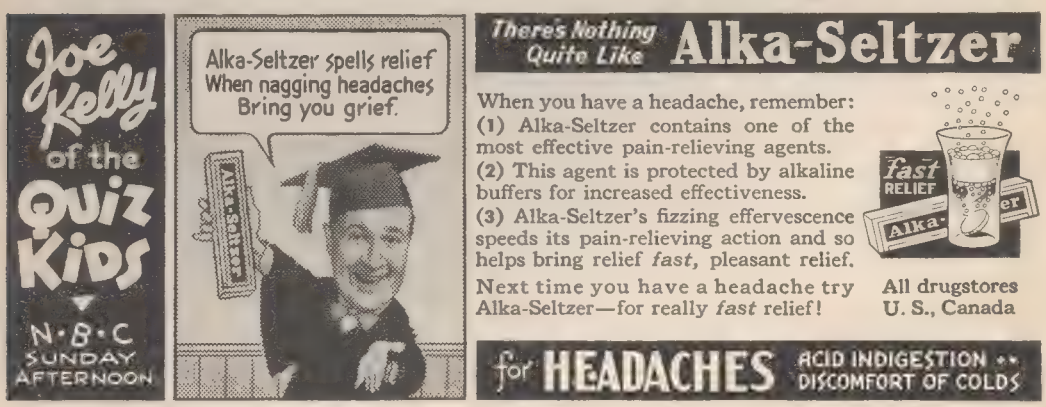
"All you got to do," Hank said grimly, "is give that hogger a little encouragement and next thing you know, St. Peter will be highballing us into the breakup yard."

The rails came up under the pilot like writhing tape. Mel checked time and speed and was reassured. They ought to make it in, with a good 10 minutes to spare. It'd been a long while since he'd seen the Old Man, and he'd have to talk fast to warm him up.

The engine leaned inquisitively out over a sheer drop as she rounded on a sharp curve. Hank yelled, and Pete twitched the brake-valve handle against the growing momentum. He sizzled away the pressure in the trainline till the brakes took hold reluctantly and held the train to an even speed. Then they slackened, and Pete fiddled away more of his air. The air-gage needle fluttered and retreated down the dial. The pump fought stubbornly to bring back effective braking power.

Cold colors ran along the rim of peaks and hogbacks. Number 72 came out on a long ledge, and they could look down into the Silverton yard. It was still dusky dawn down there where the town sprawled at the bottom of a huge granite bowl. Mules, hitched to wagons and dump cars, crawled about the mines, and the web of sidings looked like a map. Switchers bustled about like beetles, smoking furiously. Mel picked out the general manager's special—baggage car, a coach and the business car tied on behind. Smoke from her engine climbed in a straight black column high into the windless sky. The ashcat was getting her all hotted up, ready to leave town.

Mel anxiously checked his watch again. The way they were going, it ought to give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him better than 10 minutes with the Old Man. He'd unload from the 710 as they passed the private car, so he'd be sure to get at him before the Clinker could come up.

Smoke from the special's engine suddenly began to boil, and then it trailed back slowly over the short train, leaving the black column standing still and alone. Mel felt a chunk of ice lodge in his stomach. He blinked the new sunlight out of his eyes and steadied himself in the gangway for another good, hard look. But the 710 at that instant wheeled on a curve and a ridge blotted out the town. Yet his last fleeting glimpse seemed to verify his first impression—that the special was pulling out of the siding onto the maintrack.

That couldn't be, though. She wasn't due out yet, and crews pulling the G. M. would be real careful not to come out ahead of their schedule. . . Yeah, unless their timepieces were away wrong. Like Number 53's hogger, who'd rammed by Quartzsite seven minutes to the good—or bad. But handling the Old Man's train, they'd be particular about setting their watches. That first sunlight must have caused him to witness a mirage. He'd wait for another look to make sure.

Number 72 came out of the curve onto a stretch of track that ran along the lip of a ridge. You could look right down into the Silverton yard again. Mel leaned out of the gangway and stared. Yes, sir, by the jumpin' jeepers, the special had pulled out onto the maintrack! The brakeman had closed the switch behind her, and he was trotting forward, his arm waving above his head in a highball. He climbed onto the hindend as a cyclone of smoke erupted from the engine's stack. A foxtail of steam fluttered twice, and the faint crack of the whistle funneled up seconds later. The G. M.'s special was leaving town.

Mel got still another brilliant flash. Maybe the Old Man himself had become impatient and bullheaded and ordered his train to move. He was a holy terror, with a temper like dynamite. Nobody could stand up to him when he began blasting.

Mel's thoughts ricocheted. If the Old Man was heading into trouble, now was the time to gallop to the rescue. Maybe his luck was coming back fast.

He took another look. The hogger was beating her stack off, eager to give the irritable G. M. a good fast ride.

Mel howled, "Wipe the clock, Pete! The special is coming out ahead of time, right in your face!"

Pete stopped wagging his jaw and said, "Huh?"

Mel pointed frantically, and Pete blinked his pale eyes placidly in the bright sunlight.

Mel grabbed the whistle lever.

Who-o-o! Who-o-o-o! Who-o-o-o-o!

The wild scream washed over the sides of the granite bowl and fled into the serene and empty sky.

They rocked over a trestle and dived into a cut.

"Is that special already coming?" Pete inquired in his piping shout. "Them train orders don't often mean what they say. Lots of times they fool you," he added complacently.

Hank fell off the fireman's seat. "If this ain't the dangdest outnt!" he raved.

"Give her the big hole, Pete," Mel begged. "Dynamite her!"

Pete glanced reproachfully at the airgage. The needle had backed halfway down the dial. "We got to pump up some pressure first," he explained, and wagged his jaws encouragingly.

Pete had sizzled his trainline pressure away till there wasn't enough left to set the brakes. The airpump pounded sulkily, struggling to build it up again. The needle fluttered and moved an eighth of an inch up the dial.

"Then plug her!" Hank pleaded.

"We got to go easy on them cylinder heads," Pete twinkled. "Mebby I put her in reverse motion if we get too close. We got a little time yet."

"Time is the essence," Hank glowered at him resentfully. "Don't figure on too much of it."

Number 72 reeled through the last of the muleshoes and unraveled onto the

"Think this is your own private railroad? You're seven minutes ahead of schedule!"

straightaway that led into the yard. This last stretch of track was built on a descending ramp above a dry wash. Hank Wheeler, in the gangway ready to take wing, looked down at the boulders blurring by below, and knew he was trapped. You couldn't unload into that rugged landscape and come out alive.

Pete rocked placidly to the sway of his engine. The throttle was closed and the stack dead. They were shut away in a tight compartment of hurrying sound inside the early morning quiet. The high jingle of running wheels and the grunt and rumble of draft gear swarmed through the cab. The moody palpitations of the airpump began to beat in their pulses.

The rails drew a glowering hard line straight ahead, and ended in a hazy bulge where the special blocked the maintrack. Smoke climbed lazily from her engine's stack. She was standing still.

After the twist and wrench of the curves, they now seem to slide down a glinting incline like a toboggan. Yet time crawled. The seconds limped and dragged their feet, while that smudge of smoke at the bottom of the incline swam toward them.

That smudge of smoke was set so hard in Mel's bulging eyes that it wrenched them painfully when it churned up into a

black cloud that spread across half the sky. The spectacle was so unexpected that it was some time later before he figured the obvious fact that the special's engineer was trying to get his train back into the siding in time to let Number 72 by.

PETE gave the airgage a benign glance. The needle had stiffened It moved in furtive spasm past the black numerals, reaching in a kind of frightened desperation for the top of the dial where effective braking pressure existed. Pete seemed satisfied with the way it was acting, and he let his gaze return pensively down the mainiron to where the special's locomotive bellowed and slipped her drivers.

Mel's thoughts swarmed like a beehive. There was a frozen streak six inches wide down the middle of his back. If they hit, there'd be busted locomotive parts and shattered rolling stock all over the upper end of the yard. Mingled with the debris would be the gruesome remains of a number of hard-working railroaders. This was going to be the tightest one he'd ever encountered.

He regarded Pete's bland expression with a kind of furious dismay. You could read the thoughts flitting across his amiable mug like they were printed there. Pete had figured in his own aimless way just how long it would take to pump up the trainline pressure to the point on the dial that would give him effective braking power. He waited placidly for that time to come, then he'd stop his train.

But the frightful part about it was that he hadn't gone on to conjecture whether by that time he'd still be on this side of the special, or have already plowed into her. He hadn't concerned himself with intervening obstructions.

It was like a hazy picture rapidly coming into focus. The special backed up at that first dead crawl just after the slack had been shoved in. Then her hogger began to beat hell out of his engine. Smoke billowed and rolled against the high rimrock. Echoes of the roaring exhaust swirled around the circle of the granite bowl and bounced into the hollow of the sky. She picked up speed fast, then checked coming up to the switch.

The brakeman dropped off the hindend, a slim, dark point that seemed to float in the brittle sunlight as he ran back along the narrow toepath to the switchstand and opened it to let his train back into the siding. He stood quietly by the stand, ready to close the switch and let Number 72 by on the maintrack, if the special cleared in time. He didn't seem a speck anxious or fidgety.

Mel could see the special's hogger now leaning out of the cab window. He had turned around, facing backward, his left elbow on the arm rest. He was working his engine with prayer and cuss words and the hand of a master. Not once did he bother to turn his head for a look at Number 72.

Hank Wheeler, veteran boomer from all over the map, suddenly forgot that he was trapped. With the special's engine blasting away, down there a hundred carlengths dead ahead, and drawing nearer at the rate of about one car-length per second, Hank got lost in professional admiration. He'd been skeptical and derisive of these haphazard Monte men. Safety and caution weren't printed in their book. They railroaded as it came along. When a fantastic situation caught up with them, they made rules on the spot.

But they could make a good try at the close ones. They'd certainly developed a fine skill at judging speed and distance, and they were mighty dexterous in outguessing catastrophe and playing tag with destruction. They had to be, up here where the vertical landscape leaned in all directions.

And they had supreme confidence in themselves, and in one another. Nobody quit. They worked this job like it wasn't unusual or hazardous. Even the special's tallowpot didn't show any signs of leaving the scene of impending disaster. They

seemed pretty sure they'd be able to jockey this one out of the red; yet they had that go-to-hell way of doing it which showed they weren't much concerned about the outcome, either way. If it didn't work, they'd just call out the big hook and the coroner to gather up the results.

Marty Shut, the ashcat, raked the fire with a clinker bar and let his thoughts stray beyond the cab. He didn't know there was a crisis, that a blamed good smashup was just ahead down the track. It was time now to consider the next meal. He'd shoveled twelve tons of coal during the night, and again he was hungry. He speculated dreamily on whether they'd have pie at the beanery this early in the morning. A slab of ham, a couple of eggs —with headlights blanketed—spuds, hot cakes and pie. That made a good, sound breakfast. Then 10 hours' solid sleep. He hummed contentedly.

Pete's pale eyes flickered back to the air gage and took on a gratified shine. The point of the black arrow edged up to the top of the dial. His jaws picked up a decisive chop, like a runner in the stretch, while he waited for the needle to lean over toward him. He didn't give the engine ahead another glance. He was confident that his casual calculations were as trustworthy as if they had been made with a slide rule.

The airpump hammered and wheezed. A breeze spilled over the high rim of granite. Rolling smoke swirled down till it blotted out the special's engine. Smoke slid into the 710's cab and stung in Mel's eyes like acid. He waited in a bitter fog for the clash of rending steel and the hoarse cry of scalding steam when the two locomotives tore each other apart. They were that close.

The arrow on the airgage fluttered uncertainly for a moment. Then it steadied and tipped over to the right.

Pete clamped his jaws and his lips came out in a round pucker. His pale eyes speculated carefully as his bird-claw hand moved the brake-valve handle forward.

The high scream of compressed air sang plaintively through the smoke and uproar. Dynamite exploded along the length of the train. The brakes grabbed.

Number 72 stumbled and convulsed. Mel and Marty Shut grabbed for each other as they reeled against the boilerhead. Hank Wheeler clutched wildly at both sides of the window frame to keep from going overboard. Pete bowed benignly. Dust rolled along the train and fire flickered through down the line of grumbling wheels.

The dawn breeze curled the smoke, and sunlight broke through. The thunder of the special's engine filled the mountain bowl with a hurricane of sound. The coaches were in the clear and the locomotive swerved over the switchpoints. The hogger still had his back turned, ignoring the tons of sudden death that were closing in on him.

The brakeman at the switchstand showed through the smoke and sunlight. He squinted, his eyes following the engine's pony trucks coming up to the points. He waited without impatience, as if he didn't know that he'd be at the place of collision if the two locomotives came together. Sunlight fastened on his brass buttons and made them twinkle. He bunched his muscles, frowning at the wheels of the pony truck.

The 710's pilot stabbed at the pilot of the special's engine. They bobbed and nodded at each other, sparring. The brakeman pivoted on the switchstand lever. The pilot of the special's engine ducked and crawfished, and the two engines swung apart. Number 72 jolted down the maintrack, and stopped before the Silverton station.

Pete said mildly. "That was pretty close."

MEL pulled himself off the boilerhead. He let go his breath and got air circulating inside him again. He opened his mouth. Then he closed it again, and stared.

Jonah, the white mule, escaped from his corral and hiding out from the day's work,

slept on three legs beside the freight platform. He hadn't moved a muscle when the engine slid past his nose, but he now roused to open an eye and point a long ear at the tender as it stopped beside him. Then he shifted legs comfortably and went back to sleep.

The special came back down the siding and hauled up opposite Number 72.

The Clinker came forward along the train. He and Dodd had climbed into the cupola of the crummy when the whistle sounded. The dynamiting of the brakes had caught them entirely unaware, and they'd been tossed about in the cockloft like a pair of dice in a cage. The Clinker had a blackened eye from it. He came down the toepath, keeping the other eye warily on the general manager's business car.

But that didn't keep him from seeing Jonah. He stopped abruptly. He stared with gloomy alarm at the drowsing mule. There was the reincarnation of old Jake Smithers, the best redheaded carhand that ever rode a Monte freight train; an old pal of the Clinker's who'd turned against him. As he thought of it, the Clinker nearly cried. Old Jake had ridden out of this world on a string of runaway cars, and immediately returned in the shape of a white mule. Ornery old cuss—couldn't let a feud die down . . .

He didn't like this omen in his path. The presence of Jonah likely meant that if the worst hadn't already happened; it would immediately occur. He detoured the sleeping mule with glowering respect.

At the same moment, sounds like the distant tremors preceding an earthquake began in the private car. The Clinker's bad eye dilated. A kind of frozen stillness settled over the whole of Silverton yard.

The rear door of the car came open as if it had been blasted, and the Old Man himself exploded onto the observation platform. He'd been asleep through it all, and had just now been aroused by his terrified porter. He'd put on his pants, but he hadn't tucked in much of his nightshirt tail. His thin hair stood on end and his eyes were malignant.

"Just what the hell goes on here?" he said, and the ejaculation rebounded along the high granite.

The Clinker winced, and sought a culprit. He walled his bad eye up at Pete.

"I warned you to keep out of the special's way," he threatened.

Pete nodded benevolently and beamed from his cab window.

"We had time by Mel's watch," he said, "if we hurried a little. And I hurried."

The Clinker's good eye lit on Mel.

"That blamed turnip again!" he rumbled. "What time you got right now?" he demanded.

Mel tugged the big silver watch from his bib pocket. Obligingly, he offered the glass-armored dial for all to observe the correct time.

The trainmaster fingered his own gold watch and compared the two. He frowned. He glanced through the station window.

"Your ticker," he stated ominously, "is exactly sixteen minutes and eight seconds slow."

"Haw!" Mel jeered. "You said that about my chronometer before. She's just two ticks off standard, and you know it."

"*Was*," the Clinker emphasised. "But not now."

He pointed an abrupt finger at the clock inside the telegraph office. That was the regulator which was never allowed to vary more than a second or two from Mountain Standard Time.

Mel's glance roved between the clock and his watch. An incredulous expression drifted across his face. His eyes jumped back and forth between the two timepieces. Nervously, he unhooked the chain for a closer look. By the regulator, his watch had lost over 16 minutes. He looked about wildly and encountered Hank's openface grin.

"My guess is," Hank said, "that you hit the hobo too hard on the second lick you gave him with your watch. Last time I looked in on them boxcar tourists, he hadn't yet come to. The blow dislocated his balance wheel, and it must have done the same to your ticker."

The general manager held his pants up

with one hand. He leaned over the railing of the observation platform and thrust out the other hand, pointing an accusing finger at the Clinker.

"You allow a trainman of yours," he yelled, "to operate with a watch that's sixteen minutes off standard?"

The Clinker flinched and fumbled for an answer.

"Not only that," the Old Man charged, "but he carries tramps on our trains, even when you're riding along. You run that brakeman off this railroad, and see he never comes back."

The special began to roll slowly up the siding again.

"Hey!" Mel yelled frantically after it. "Don't you remember me? That night I—"

The G. M.'s receding stare flattened out on Mel's stub length and frosted over. It held no recognition. A brass collar's memory of services rendered is not enduring. The gratitude of the potentates is not dependable.

Hank's ramshackle face leered through the blur around Mel's head.

"I done told you," Hank said, "we oughta looked for a job outa Denver, instead of comin' back to this goat path."

The Clinker's beetling expression wavered and his glance swiveled between the two of them. A satisfied sneer contorted his stony countenance. He twinkled like cold sunlight on a glacier.

"So," he muttered at Hank, "even though you disclaimed it, you are a friend of Mel's. An old pal he brought up here to get a job." He gave Mel a brooding look. "You will be missed on the Monte," he said, "but not regretted." He gave Hank a cold beam. "Your stay has been so brief," he mused, "that you won't be much remembered."

"Which," Hank allowed, "won't break my heart a bit. All I want to do is get out of this sway-backed country without harm to myself."

He glanced up at the hogger.

"That was a nice ride, Pete," he remarked. "But just one is enough."

Pete looked down at the boomer with a tinge of regret.

"About them big Espee engines," he piped. "Does it take a big engineer to run them? Four-five times bigger than me?"

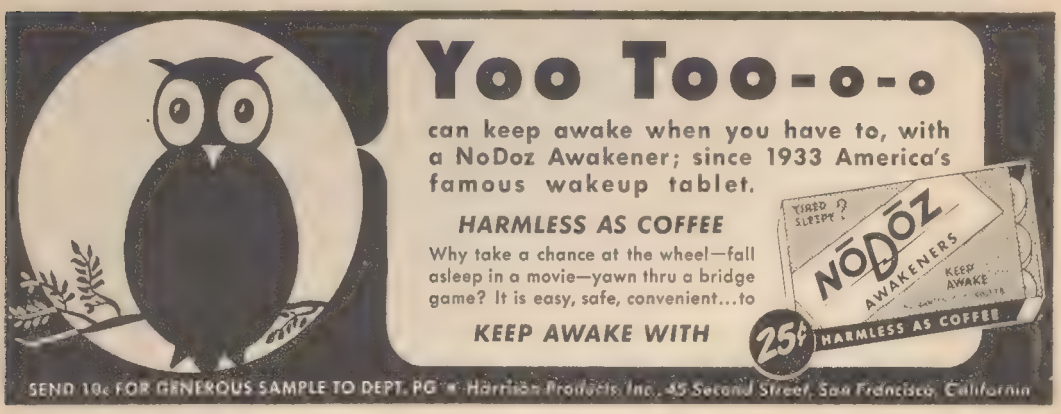
"Why, no," Hank explained. "They got elevators in the cabs that take the hogger up and down between his different chores."

"Think of that!" Pete marveled.

The big watch dangled from Mel's nerveless hand like the strangled remains of some crawling creature. The ground wasn't steady under his feet; in a kind of recoil from his crowding misfortunes, he backed into the white mule's rump.

Jonah put forward an ear and opened one eye. He kicked once, like a wink of light. The watch pinged as the lightning hoof caught it on the back side. The ticker looped and landed on the platform. It bounced and ricocheted off the station and dived into a pile of headend cinders.

The Clinker's bad eye bulged as he watched the timepiece's buzzing flight. It's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impossible to be sure how a man thinks who has spent a lifetime on the High Divide, where the air is thin and close to the next world in more ways than one. But an aspect of awe tempered with satisfaction seemed to hover over the Clinker's face.

They said old Jake Smithers had crossed back from the other side in the form of a white mule, just to continue their ancient feud. But now the Clinker knew that this was only the half of it. They'd been pals back there in the bright young years, and the old affections still existed. By that gesture of his hind leg, Jonah had explicitly warned all concerned that he'd allow no other redheaded carhand to intrude into their complicated relationship from both sides of the Beyond.

The Clinker approached Jonah cautiously, and patted him warily on the shoulder. Jonah opened an eye. He seemed to wink once, and closed it again. Then he stamped his hind foot somewhat menacingly.

The Clinker backed away, and climbed into the cab. Pete headed Number 72 into a breakup track.

THE fragments of Mel's glittering dream of eternal sunshine littered the Silverton yard. The bright pictures of fandangos and fair *senoritas* flickered and died. Hank Wheeler's malicious grin returned to tell him that Hank would spread the word of his discomfiture here on the Monte. And he'd sure make a good story of it. He'd relate it in yard offices and switch shanties down there where the drifters gathered to soak up the sun. And those veteran boomers would shout with glee at the ridiculous young punk who'd claimed he was set in good with a brass collar who didn't even remember him when the pinch came.

The bitter taste of winter was in the bright air. Soon the storms would come yelping through the high passes. He'd have to pawn that new blue suit and wander away alone into a hostile world.

Hank's cheerful voice came through the gloom. "Oldtimer," he said, "we gotta rapidly figure ways and means of eating."

Mel began a cautious ascent from the depths.

"My credit won't be good at the beanery," he reckoned, "now that I'm no longer employed."

"You didn't," Hank asked, "by any chance, have something left from the two bucks you took off'n the train?"

"We ate up a dollar and six-bits' worth of grub between us," Mel recalled with satisfaction, "and I left a quarter for the girl."

"She was a cute trick," Hank agreed amiably. "Let's prospect."

Mel scooped his watch from the head-end cinders in passing and stowed it contemptuously in his back-side pocket.

The station door slammed briskly. The night operator, just off duty, came out into the sharp sunlight. He had a considerable slim length, and a faintly skeptical eye. He carried a book under his arm.

Hank Wheeler paused like a bird dog coming up to point. His long face screwed up in a spasm of delight. His mouth fell open.

"*Eddie Sand!*" he whooped.

He galloped over the platform planking with the sound of a whimsical cyclone.

The telegraph operator turned and his eyes lit with sardonic humor. Hank pounced upon him. They knocked each other's hats off and pounded each other resoundingly.

Hank brayed, "Eddie, I looked all over Denver for you. I spent a whole week, three nights ago, scoutin' the town to see where you was at."

"I know the story," Eddie Sand said derisively, "just like you'd written it to me in a long letter. You met a fellow confederate, let your foot rest too long on the brass rail and lost your way. You'd certainly never have strayed up here if you hadn't got lost."

"Yeah," Hank grinned. "It was something like that. Meet Mel Hatch, Eddie. He lured me to these altitudes yesterday to go to work for the Monte. And then," Hank slapped his thigh, "what do you know! This morning, just now, we both

The Old Man exploded. "You allow a trainman to operate with a watch that's sixteen minutes slow!"'

got fired. Like that!" Hank snapped his fingers.

Their swift comments ran nimbly through the crisp air, and the white sunlight picked them out in detail; Hank Wheeler, long-jointed, haphazard, his clothing loose and flapping and torn in a number of places. He looked like an animated scarecrow, but his voice was raucous with delight. He'd joined up with his old pal and fellow confederate, and the careless road stretched ahead like the primrose path.

Eddie Sand's slim height almost matched Hank's rambling length. He moved with a kind of slow, deliberate confidence, but they said he was chain lightning on the Morse wire, and he could act fast to pull a bad one out of the hole.

Mel gulped. He'd felt that a boomer who'd become a legend must have lived a long time ago. Eddie Sand was an irrepressible brass pounder who drifted through time and space like a shadowy myth. But here he was not much older than Mel was, a whimsical guy, mild as milk, but with a tincture of red in his hair

that might account for his low detonating point. There was a spark away back in his mocking eyes, and he smiled slow and easy. He seemed like he wouldn't be hard to get along with.

Listening to their talk, watching their faces, Mel caught glimpses of the inner workings of their willful, wayward breed. Maybe it was in their eyes—quick and restless and seeming in their depths to be always dreaming beyond far horizons. If any part of life cost too much of their liberty and independence, they wouldn't buy it. Yet somewhere beneath was hard substance, sharpened and polished by the action of time and the exacting process of perfecting themselves in their trade.

Mel's ears bent forward to catch the easy colloquy of the two boomers as they caught up on each other's immediate past. Names of far-flung railroads flickered through their remarks like bright beads—the Katy and the Wabash, the Rock Island and north to the Pere Marquette: all the glinting ribbons of steel they'd been engaged upon since last they'd met.

Then the talk turned sharply to their next move, and they spoke between them of the news they'd had from the southlands. Win Fall, a brethren and a pilgrim of long standing, had written Eddie from Calexico—he'd intended it as a bulletin to be passed on to whoever of the tong was interested—that there was a bumper crop of green stuff to be moved from Imperial Valley, and that the Espee was hiring carhands.

Win was enjoying himself down there in the sunshine. He knew a bright-eyed *senorita* or two and three days after a bull fight in Mexicali, across the line in Mexico, you could get a bullbeef steak dinner in Alley 19 that would cause you to bite the trainmaster and kick the yardmaster in the teeth. Win claimed that the Mexican beer was creamed dynamite.

Blithely they designed the shimmering future—two rubber-tired pilgrims, headed for the sunshine and the smell of orange blossoms. Mel wondered dismally how many more tragic years lay between him and that vivid existence.

A cheerful remark of Eddie's worked its way into the gloomy recesses of his mind.

"Come on, Mel," Eddie invited. "Let's eat."

"Yeah," Hank agreed. "And plenty of it. And then we'll get us some shuteye. These here altitudes do wear you down."

Mel followed dumbly. Hank burbled, his words flitting back in abrupt spurts.

"Mister, you know I blamed near got mine the very first switch I made for this goat path? Dark as the inside of your hat, and Mel told me to spot them, but I guess my head was light with this thin air I ain't accustomed to, and I turned 'em loose instead."

Hank swung his long arms.

"That siding just fell down hill for forty car-lengths before it leveled off, and at the other end it took to empty space. Thousands of feet of it.

"Then the old Clinker come down outa the sky, and the kid here come up from a hole in the ground, it seemed to me. Anyhow, first thing I knowed, they was up there with me on top of the string of cars that was scootin' like they was on a roller coaster, and they was tiein' down brakes fast. Which warned me I'd better do the same."

Hank reflected profoundly.

"If it hadn't been for them two," he admitted, "I'd 'a sure gone to glory."

Hank became vociferous again.

"Yes, sir, you won't believe it, but I gotta tell you how Mel collected our eatin' money from a pair of bums, when we was at the point of starvation. And when attacked by a third tramp, twice his size, Mel beat the vagrant over the head with his Bermuda onion watch." Hank snickered. "You gotta be handy in all departments to hold down a job on the Monte."

Eddie opened the beanery door, and smells of coffee and the sizzle of frying food made Mel giddy.

LATE afternoon sunlight streamed through a rift in the window blind and probed the darkened room. Hank slept

with silent intentness. Mel tossed and writhed as a nightmare blizzard rode him.

The vindictive alarm clock burped morosely. It took a long, bitter breath, then let go an agonized clamor.

Hank flung out his arms, battling the covers, trying to open his eyes. He groped and captured the clock. He choked it into silence and clutched it to him and glared at Mel.

Mel sat bolt upright in bed, blinking. He snatched his ancient watch from the stand and tucked it for protection under the covers.

The two regarded each other warily. Hank put his bare feet to the floor and flinched as they touched cold boards.

"Time to get out of this blamed climate," he grumbled, "and go where you can lap up some sun."

He pulled on his union suit and began the interminable job of buttoning it up.

"You don't live as long or die as happy in these mountains," he muttered darkly. "This country ain't fit for anybody but the Eskimos."

He took a clean thousand-miler from his telescope suitcase and pulled it on.

"If you got anybody here to say goodbye to," he instructed Mel darkly, "you'd better do it this evenin'. 'cause Eddie is through his job tonight, and we leave town in the mornin'."

Mel's thoughts burrowed, and for an instant bright pictures flared in his mind. For just that length of time he was adrift on the careless road, and then stark reality caught up with him and turned him back.

"You know blamed well," he said fretfully, "that I ain't got enough cash to get me out of town, 'less I pawn my new clothes. And I can't travel respectable without I'm all dressed up."

"Eddie's got a wad of dough that big." Hank doubled his hand into a big fist and looked at it disparagingly. "He's got no business with that much money, and we gotta help him git rid of it. With that much wealth he's sometimes hard to get along with."

Hank pulled on his pants.

"It won't take much, ridin' for free in crummies," he calculated. "And when you git to workin' in Imperial Valley, you can soon pay Eddie back. It's customary in such cases. I got it all fixed," he asserted.

Mel went back over Hank's words carefully to fix them in his swimming mind.

If they meant what he thought they did, why—hey! If Hank wasn't kidding, he could migrate with the birds and live in sunshine. Hunker down with the pilgrims beside the yard office and join in the brave talk of the mainline and the iron horse. The tales they told would sure grow tall in that lush climate.

Yeah, and he, too, would ride the thundering hotshots through warm nights as they rolled the perishables out of the southlands to the cold weather markets . . .

Mel got slowly out of bed and began putting on his new blue suit. Come next spring when the pilgrims migrated—next spring nothing!

His time was now!

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Keystone Photo

New steel across more rivers. Australia's seven-span Hawkesbury River bridge replaces the old-fashioned structure at right with a highspeed runway that ends old 4 mph. restrictions

Railroad Magazine Index for 1948

ONCE again we offer a detailed, cross-reference index of fact material used in *Railroad Magazine*. As in the past the 1948 listing carries the item, followed by the month and page. Asterisks (*) indicate pictures. The list is issued mainly to serve readers who save their old copies and want to check back on elusive bits of information. We've also considered the need of railroaders, students, historians, journalists, researchers.

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Smokeless railroading *a la* Erie's Cleveland District Diesel-electrics? We'll take No. 3364's cloud by day and pillar of fire by night. She's one of the S-s is featured in Fred Blakeslee's cover painting this month

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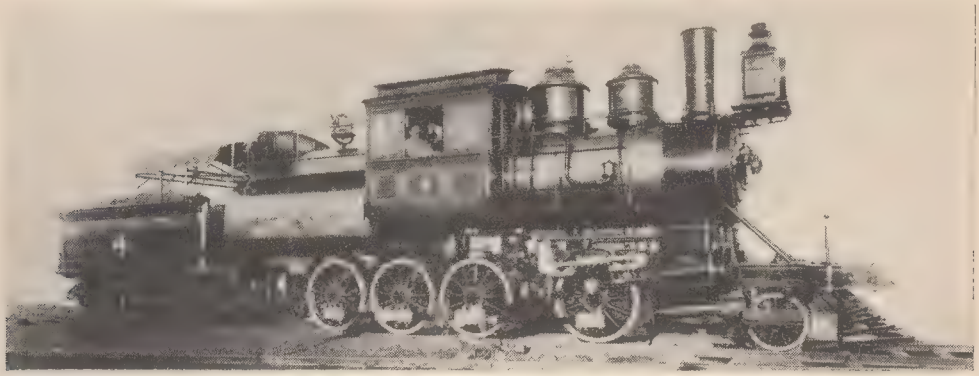

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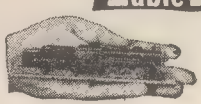

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Leslie R. Ross

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Ollie Fyfe

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(clipped from page 145 or else home-made).

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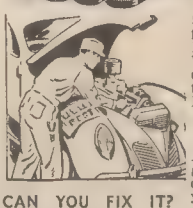

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WILLIAM DILGER, *no address given:* Philatelic Foundation, 22 E. 35, New York City 16, advises you follow stamp mags. and daily papers for rr. cachet news. No special rr. cachet publications exist.

(*) RICHARD DILL, 1123 N. Edward, Decatur, Ill., wants to buy old Ill. Trac. emp. tts.

LAWRENCE DIXON, 4013088 Ac Dixon, 88 Sqdrn., R.A.F. Kai Tak, Kowloon, Hong Kong, China, wants to corres. with someone interested in exchanging Anglo-American rail news.

H. L. FAIRCHILD, 2912 Carolina St., San Pedro, Calif., has size 116 pix of 250 rds. to trade for any rd., class; many scenic rail shots to trade for eng., depots, size 122.

J. HARRY FELDEN, Jr., 3345 Richmond St., Philadelphia 34, Pa., has *Model Railroaders* '37-'42, '46, '47; and bound '38, '46, 47, good cond.; $75 compl.; also *Trains* Jan. '43-Oct. '47, vols. 4, 5, 6 bound, good cond. $50. compl. Has other *Model Railroader.*

TED GAY, 156 Van Buren Ave., Teaneck, N. J., has p. c., size 122 pix for sale, many rds. State your wants.

Anthony Lanza

Hogger of *Century* retires. Warm handshake from Supt. Carkhuff greets 69-year-old John Hoyt when latter pulled *20th Century* into Grand Central for last time. Veteran retired after 55 years with Central

LON GEDDES, 4507 N. Racine, Chicago, Ill., will sell five 5x7 and 50 p. c. pix; also 6 negs, size 116 DSS&A, Cal. & Hecla, Cop. Rge., Milw. Rd., etc., $3.50.

DEL GERBAZ, Woody Creek, Colo., is starting museum Colo. railroadiana to be located near Aspen or Colo. Springs, Colo. Needs old tts., annual passes, pix, *Car Builders Cycl.,* 1900 or prior yrs., pix p. c. relics, or what have you. Willing to pay cash or accept as loan. Write first.

(R) J. W. HELFRICH, 135 Hillside Ave., Piedmont 11, Calif., will sell *Railroad Magazines* '33-'40, $2.50 per yr.; '41-'43, '45, $2 per yr.; good covers, unclipped exc. Aug., Dec. '33, these have reader's coupon clipped. Entire lot $20 collect. Also 50 odd copies '32 to '45, $5 COD. Wants Wabash, WPT, W&LE tts., other items; Has old W&LE 5x7 pix, 25c ea. W&LE fans, please write.

E. L. HENNESSEY, 721 George Ave., South Bend, Ind., wants 8 mm. films rr. action, black or colored.

CHARLES V. HESS, 209 S. Cottage Ave., Goshen 4, Ind., will sell steam pix, p. c. size negs. State wants.

ROBT. HOLST, 7314 Ridge Ave., Chicago 45, Ill., wants to buy indexes for *Model Railroader,* '35 thru '39, '41.

Harris & Ewing

Feature attraction in any land, exhibit of American model trains in Tokyo museum arouses keen interest of Japanese princes and rail official. *Left to right:* Prince Yoshinomiya, Director of Transportation T. Yamanaka, Crown Prince Akihito

(*) J. KARL HOWARD, 3177 S.W. 25th Terrace, Miami 33, Fla., offers 10 diff. transportation tokens, mostly southern, some obsolete, $1. Also has old Miami streetcar, FEC Ry. loco pix, size 116, 6 for 50c.

H. H. HUGHES, 1635 Ogden St., Philadelphia 30, Pa., wants specifications of Rdg. 2100 class, *Northern* type.

A. R. JAGGARD, Blue Gum Rd., Lambton, Newcastle, Australia, wants friends in America to swap rr. pix, news, with him.

HENRY C. JONES, 906 D St., Sparrows Point 19, Md., has 240 diff. 4x7½ in. Baldwin Builders' pix; *Baldwin Loco*, July '23; Apr. '24; Jan., Oct. '27; Oct. '28; Apr., Oct. '31; Jan., Apr., July, Oct. '33; Nov. '41; will trade for certain issues missing from his collec. Write for list.

(R) ARNOLD B. JOSEPH, 2512 Tratman Ave., New York 61, N. Y., has *Railroad Magazines* '35 to '48 incl.; emp. tts. for sale. Lists for stamped env.; will also trade for rr. books, rail pix, any types U. S. maps, rr.

ELLIOTT M. KAHN, 309 Royal, New Orleans 16, La., will sell p. c. size pix 300 diff. rds., steam, Diesel, elec. locos, stats., cabooses, unusual rolling stock, no printed list. Has few size 116, 122 negs. for sale.

(R) J. P. KING, 185 Plymouth Rd., Redditch, Worcestershire, England, unable to obtain *Railroad Magazine* in his country, would like to arrange a swap with an American who would subscribe to *Railroad* for him in return for English *Railway Magazine*, or any other booklet he might want. King is 24; can obtain booklets giving compl. details, loco pix, many other books.

R. KIRKWOOD, 27 Rittenhouse St., N. E., Washington, D. C., will sell pix of oldtimers back to 1860 incl. 999 at full speed with tr. of five Wagner narrow vestibule cars.

RONOLD G. KNOST, 1031 Kuhlman Lane, Webstergroves 19, Mo., wants pix of cabooses and obs. cars of 'name' trs.

(*) WILLIAM LIBBY, Jr., South Windham, Me., wants pix, negs. Portland, Lewiston interurbans. Will sell or swap Maine trolley pix.

(*) ROBT. J. McLEOD, 731 S. 28th St., Milwaukee 4, Wis., has large no. of size 616 elec. pix for sale; 7c ea. or 15 for $1. List for stamp. Buys, sells, trades good size 616 negs; wants elec. emp. tts.

(R) HAROLD McMICHAEL, Waterford, Ontario, Can., will sell part of his collec., incl. unclipped *Railroad Magazine* from '36 on; U. S., foreign loco scrapbooks,

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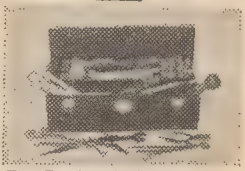

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(*) PAUL MAHONEY, c/o The Sheraton Hotel, Rochester 4, N. Y., wants to buy copies *Elec. Ry. Journal, Transit Journal, Bus Transportation* up to Mar. '48, *ERA Headlights, CERA Bulletins;* any other publications in elec. field.

(*) WALTER MARTIN, 63 Florence Ave., Hawthorne, N. J., wants info. on elec. industrial frt. rrs. for forthcoming list private elec. rrs.; must be std.-gage lines. Those sending info will receive copy list free.

ALDEN E. MILLER, 3212 34th Ave. S., Minneapolis 6, Minn., is disposing of vast rr. collec. State specialities or specific wants in pix, mags., reports, ords., tts., rr. books, passes, tkts., timecards, *Trains,* other rr. mags. Has *R&LHS Bulletins* No. 1 to 73; *Trains* No. 1, Vol. 1 to current date.

(*) WARREN E. MILLER, 306 Jerome Ave., Piedmont 10, Calif., will sell size 616 negs. SP, WP, NYC, PRR, C&O, IC, MoP, CN, CP, PGE, RI, D&RGW, others, 40c ea. up. Also has juice negs. Portland Traction, BCE, Key System, PE, LAT, Denver, CSL, SLPS, others.

(*) WM. MOLL, Jr., 205 Bay St., Neptune Beach, Fla., wants any pix Atlanta, Ga. area trolleys, esp. old Atlanta Northern Ry. cars; also maps, interurban, tkts., etc.

R. C. NAUMANN, 338½ W. 76th St., Los Angeles 3, Calif., has *Model Railroaders,* good and excell. cond. July-Oct. '37; '38, exc. Mar.; '40, ex. Aug.; '43, exc. Sept.; '39; '41, '42, '44, '45, 46 compl.; Jan.-Apr. '47. *Trains,* Feb. '41, Mar. 43. Best offer, part or compl.

(R) RALPH PARNES, 543 S. Redfield St., Philadelphia 43, Pa., wants to buy *Railroad,* July '44, Jan. '47; *Model Craftsman,* Oct. '43, Apr. '44; all pix n. g., pix, info. on Yosemite Valley RR.

ROBT. PIVARNIK, Fayette City, Pa., wants to buy loco rosters PS&N. EJ&E, C&IM, AC&Y, LS&I, TP&W, Union RR.

DAVID LEWIS PORTER, 910 Forest Glen Dr., Winnetka, Ill., has tt. collec.; was to trade with other collectors.

E. R. RICHTER, Box 1044, Ft. Wayne, Ind., has pix all engs. at Rail Fair, size 5x7, 8x10, 15c, 25c ea.

(*) PAUL SCHUETT, New Lenox, Ill., has RI, IC, EJ&E emp. tts.; also various tts.; 2 old *Off. Guides.* Will trade clearance forms for tr. ords., or swap other emp. tts., esp. RI divs. west or south of Cedar Rapids prefers other rrs. Sending self-add. stamped env.

ADDISON A. SCHWALM, 26 Gloucester St., Apt. 6, Ottawa, Ont., Canada, has size 116 pix CN, CP power, smaller rds. to trade or sell for foreign, U. S. loco pix. Will swap lists.

(R) C. V. SIMON, 583 Arlington, Dubuque, Ia., will sell *Railroad Magazine* '37 to date, excell. cond., $2.50 per yr.

R. N. STALL, 4458 Washington Blvd., Indianapolis 5, Ind., wants early *Car Builders Cyclo. and Dictionary.* State price, cond.

S. S. SUTTON, 5510 W. Barry Ave., Chicago 41, Ill., wants to exch. good size 116, 616 negs. steam power, prefers shortlines; has few good clean emp. tts. to exch.

GRANVILLE THOMAS, P. O. Dept., Millville, N. J., will sell emp. mags. of most all rrs. in U. S. Has old Rdg., Atlantic City RR., West Jersey RR. views to trade.

MICHAEL VAIUSO, Jr., 54 Arch St., Amsterdam, N. Y., wants to hear from rr. collectors and photographers in New York State. Send sample pix, lists, if any.

ALVIN A. VLASEK, New York Central, Camp 17, La Grange, O., wants to hear from other "old gandies" all over U. S.

A. VON BLON, 1700 West Ave., Waco, Tex., will sell to highest cash offer size 116 (1-A Graflex) 6, 8 lens, 1,000 shutter-speed or will trade for passes, emp., or pub. tts. or switch keys.

(R) G. W. WATTS, 652 Woodlawn Ave., Memphis 7, Tenn., will sell L&N emp. tts., 25c ea.; also L&N, NC&STL, IC, MoP, CB&Q tr. ords. to swamp for others. Will sell *Railroad Magazines,* unclipped, p.p., 25c ea.

V. N. WOOTTON, 28 Reiby St., Enmore, Sydney, N. S. W., Australia, wants to corres. with an American railroader his own age—24—who lives next to a line as he does. Hasn't a great deal of pix at hand but would be willing to send a snap with each letter.

Reader's Choice Coupon

Stories, features and departments I like best in the February issue are:

1. .....
2. .....
3. .....
4. .....
5. .....
6. .....

Best photo is on page.....

Name .....

Occupation .....

Address .....

Is stamped envelope enclosed for Camera Club pin and membership card?.....
Railroad Magazine, 205 E. 42nd St., New York City 17.

Model Trading Post

DUNCAN L. BRYANT, 634 S. Pleasant St., Princeton., Ill., will sell tinplate catalogs, model rr. mags. '30 to date, or trade for issues he needs.

W. J. BURNS, Box 12, Tenafly, N. J., will buy Lionel 072 tr., switches, solid-rail or tinplate.

ALBERT F. CLOW, Rm. 4423, Interstate Commerce Comm., Washington 25, D. C., will sell or swap equivalent value old Beggs live steamer 2-2-2, $300, good cond.

W. H. COX, 1146½ S. Clark Dr., Los Angeles 35, Calif., has live steamer ½ in. scale, 2½ in. gage, 4-6-2 British prototype, engineer built, steam gage, water glass, displacement lubricator, etc.; cost $900, will sell $350, or trade for speed graphic, Contax, jewelry, guns or stationary model engs.

Major JOHN S. CRULL, 29th Signal Battalion, Ft. Bliss, Tex., will sell O gage locos, 2- or 3-rail trucks, Gargraves trk., many other items; most never used.

ARTHUR H. GILES, 429 E. 64th St., New York City, N. Y., will sell Lionel 2332, GGI, $30; 2420 wrecker caboose $5.20; 2411 flatcar with lumber load, $3; 2456 hopper, $3.40; eqpmt. only used ½ hour. Also Lionel O-72 tubular trk., 16 curved, 4 str., new O gage trk., 10 curved, 8 str., entire lot $13. Will take $50.

K. E. GOODSPEED, Box 391, Malone, N. Y., will sell Lionel coal loader cheap.

K. C. HATHEWAY, 4057 King, La Mesa, Calif., has HO eqpmt. for sale; 3 AF *Hudsons* conv. to 12 volts D. C.; Mantua *Belle*; Varney *A* unit, 3 colored and decaled for AT&SF; all in perf. cond.

JOHN A. HORTON, 4115 Francis Ave., Cincinnati, O., has old locos, sets for sale; Dorfan, Buddy-L, Joy Line, AF, Lionel; also old tin tr. named *Osceola* made around 1880. Send for compl. list.

RICHARD N. KENARY, 15 Waters St., Millbury, Mass., will sell to highest bidder, all AF 3/16 in. S gage; 1 pr. r.c. switches brand new, 56 pieces trk., good cond.; auto. dump car with accessories, 3 trk. terminals; 1 r.c. uncoupler, accessories. Wants to sell in one lot.

ROBT. E. KITZMILLER, 1609 S. Ithan St., Philadelphia 43, Pa., will sell 24 frt. cars, 7 pass., 3 locos, etc., all HO in good cond., little fixing. List for stamp.

ALBERT R. KOEHLER, 214 Pennsylvania Ave., Hillside, N. J., will sell in orig. cartons, Varney Pacific, tender, $35; Mantua Pacific, $42; Mantua Mogul or *Belle of the 80's*, $25 ea.

MAURICE W. LASATER, 1328½ N. Monroe St., Decatur, Ill., will sell or trade for AF S-gage eqpmt.; HO gage Dockside kit, AF Hudson, 10 frt. cars, 1 pass., Truscale roadbed, brass rail, switches, Ohmite MT-16 rheostat. Entire lot $50.

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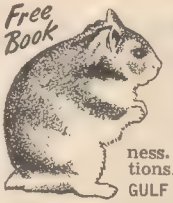

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LELANE CO. Dept. PG-29, Box 571 **Kansas City 10, Mo.**

BURTON LOGAN, 705 E. 16th, Winfield, Kan., will sell or trade large collec. old toy trs.; many std., O gage.

R. C. McLAREN, 1035 Mapleton Ave., Oak Park, Ill., will sell large quantity O, HO, std.-gage eqpmt; locos, cars, switches, trk., trsfs., accessories. List for stamp.

(R) E. MIZERAH, 4125 W. 111 St., Inglewood, Calif., wants to trade *Railroad Magazine, Model Builder, Trains,* '45 to '47, for O gage trk. or frt. cars.

JOE PARISH, 2919½ Crestmoore Pl., Los Angeles 41, Calif., will sell 1 Buddy-L loco, 1 boxcar, 1 cattle car, 1 tankcar, 48 ft. trk. Make offer.

F. J. PETERS, 7 Canal St., Plainville, Conn., will buy O72 solid Lionel trk., curved and str.

RALPH SEGALMAN, 1409 Nebraska, Sioux City, Ia., has std.-gage trk. and eqpmt., incl. 2 frt., 1 pass. tr., 2 sets switches, 1 elec. controlled. Will trade or pay cash for compl. set trk., trs. of smaller gage.

R. J. WOODRUFF, 118 El Camino Real, Berkeley 5, Calif., wants various O gage tinplate items, esp. old Ives locos, pass. cars. Will buy or swap eqmt.

Flagstops

THE RAILROADIANS have done it again. Your railroad calendar, which features in 1949 the Nevada County Narrow Gauge—Never Come and Never Go—is on sale at the San Francisco Branch, Railroadians of America, 1500 Chancellor Ave., Richmond, Calif., at 50c each postpaid. Lithographed in three colors on heavy bristol paper 15 by 21 inches, this calendar contains a complete roster of NCNG locomotives, a brief history and map of the line, photos of two early engines and a shot of high Bear River bridge. Prompt delivery is guaranteed.

* * *

GOLDEN SPIKE ceremony marking the formal opening of the Metropolitan Southern (0 gage), the Metropolitan Eastern (HO gage) and the Crown Point interurban will be held on January 7th, 8-10 p.m., Room 457, Union Station, Washington, D. C. The Metropolitan Society of Model Engineers, which sponsors of this event, expects representatives of the five roads entering the Capital, D. C. officials and newsmen to attend, since this day will be the culmination of 18 months of construction work.

* * *

NON-PROFIT Railroad Pass Collectors Club of America enters another year's service with hopes that 1949 will increase its membership. Object of the group is to collect and exchange bits of railroadiana among rail collectors; operations are managed through Secretary Frank P. Koetz, 12859 Hoyne Ave., Blue Island, Ill. Those interested in joining may write the secretary, or W. Robbins, Pres., 1313 N. John St., Palestine, Tex.

* * *

GRAND CENTRAL EXPOSÉ. The Railfan Society, 296 Henderson St., Jersey City, N. J., has published an explanation of the recent Grand Central excursion fiasco which we'd like to pass along. Anyone who thinks it's an easy matter to arrange fantrips ought to get behind the scenes on any one project and listen to the groans. Take this Grand Central tour planned for October 3rd, for example. John Kneiling thought that the road had agreed to the run last May and so the group went through with expensive printing, advertising and mailing—and we plugged it, knowing the interest it would evoke—only to have the NYC state flatly in late September that no such tour had ever been premeditated. If you were one of the disappointed, The Railfan Society asks you to understand its own embarrassment.

* * *

RAILFANS who sometimes dream of taking a railtrip through Ireland, or would like to travel via the reports of Irishmen themselves, will be interested in joining the Irish Railway Record Society, a young group sponsored by two Dubliners. Within the past year membership has increased from 94 to 195, more than 25 percent of this representing those living outside Ireland. An illustrated journal is published twice yearly to keep everyone up to date on the doings of active members, the reports tendered at monthly meetings and future plans. This has been all done in one year; with expansion greater things are hoped for. Subscription for home and overseas members is $2 annually, plus $1 entrance fee.

* * *

TEHACHAPI FANTRIP. Railroad Boosters, Los Angeles, Calif. will sponsor a tour of Espee trackage and Sunset Railway to Taft in San Joaquin Valley on *January 30th,* special train including photo stops at the Loop and Los Angeles 36, Calif., or phone GR 2986.
Bakersfield, returning to L.A. at 10:30 p.m. For all information contact Cook Reeves, Treas., 947 N. Laurel Ave.,

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